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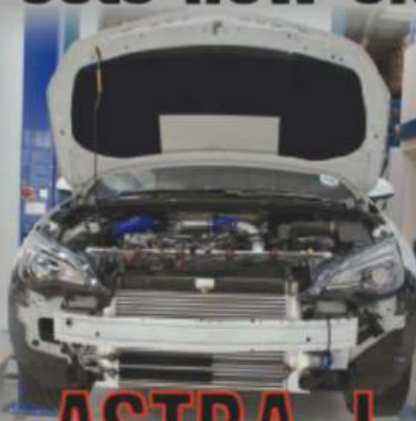
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PERFORMANCE VAUXHALL



NEW 'N' OLD!

Many of you die-hard fans will already have got wind of the all new Astra Mk7, but for those of you who haven't we've taken a closer look over on page 16.

In order to gauge your reaction we posted it up on our Facebook page. Now normally posting new models brings out the grumpy brigade, likening the car to umpteen other new models, moaning that it's "not as good as their Mk3", or just being downright offensive. But we were surprised, and not a little relieved that there were plenty of positive comments from people who were genuinely excited about it. Obviously we're waiting on the performance models, and while there are rumours of a GSi variant, nothing is official, not yet at least.

Vauxhall are also taking the rather unusual step of retailing the Mk6 VXR

alongside the Mk7 (presumably until a Mk7 VXR gets signed off).

If all this talk of new stuff is having you pining for a bit of retro nostalgia, then you need to get yourself over to page 82 where we've had a closer look at the Nova Sports assembled by the Nova Sport Register (www.novasportregister.com) at Billing. It really was a fantastic gathering, and was just one of the many highlights of the annual VBOA event, which we've also covered in detail on page 72.

As you've hopefully come to expect from Performance Vauxhall we've tried to give you an exciting blend of old and modern, and we very much hope you enjoy the read.

Don

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VAUXHALL**
SEE PAGE 120
FOR DETAILS

MEET THE TEAM

The people who bring you Performance Vauxhall, and what we've been up to this month...



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Put the wheels back on the Turbo, and cleaned mould off the seats. Progress is progress right?

NEXT ISSUE ON SALE: 20 NOVEMBER 2015

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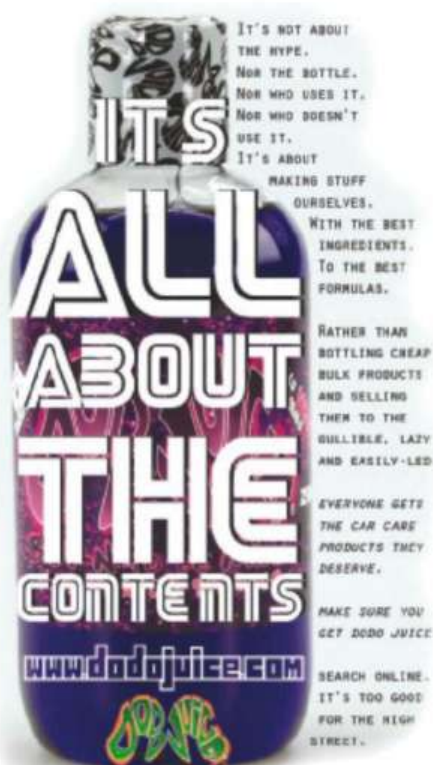
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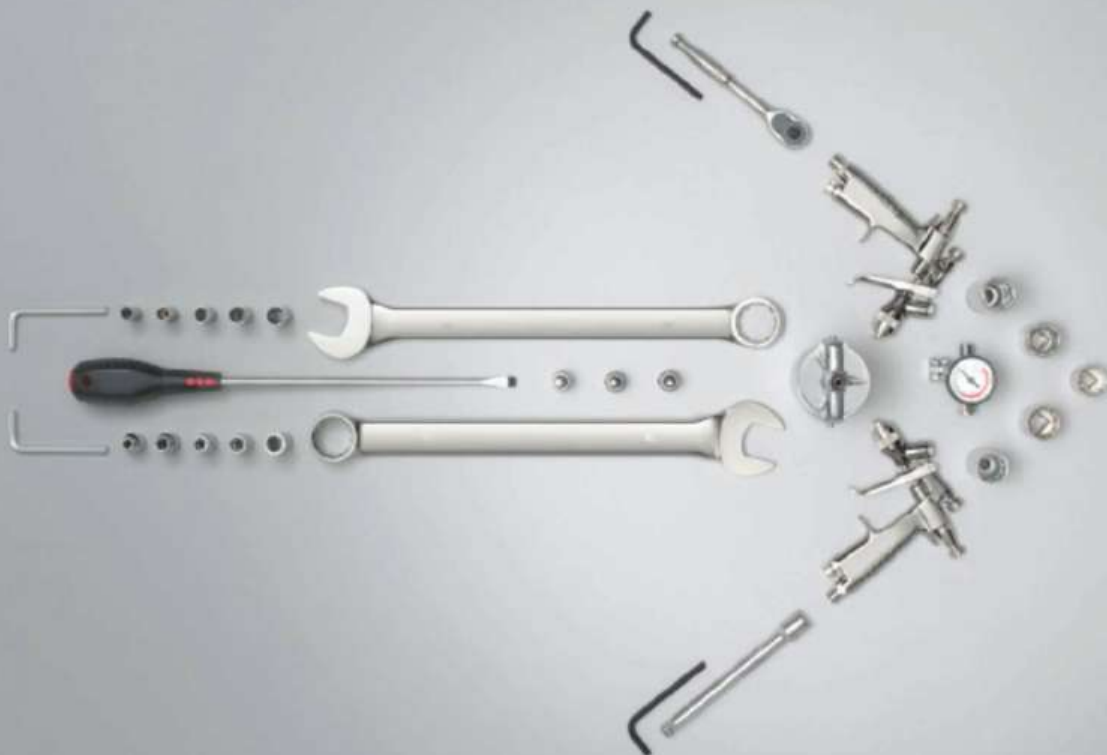
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DRAG STAR

Sam Bolton's 800bhp turbocharged Tigra
A drag car proves that Vauxhall's once-prominent coupé is experiencing a new lease of life at the race track...

WORDS Dan Furr **PHOTOS** Matt Woods



FAST FACTS

- 800bhp forged C20NE/Z20LET hybrid
- Sapinho Cambios F18 gearset
- Precision 6870 turbocharger
- Quaife limited-slip differential
- Single-piece fibreglass front end

DRAG TIGRA



When was the last time that you saw a first-generation Tигра pootling down the road? Unless you happen to be the owner of one of these Griffin-badged coupés, we'll bet that it was a while back, which is surprising when you consider how popular Vauxhall's diminutive 2+2 was with car buyers during a six-year production run that ended at the turn of the century.

Perhaps the reason for this absence of tidy Tigras from the nation's highways can be explained by the model's increasingly popular presence at the race track; recognised as possessing finer aerodynamic qualities than its Corsa B stablemate, the Tигра A has become something of an attractive choice for modifiers participating in competitive motorsport series ranging from Time Attack to front-wheel drive drag racing championships.

SLIPPERY CUSTOMER

Peterborough man, Sam Bolton, is a prime example of a petrolhead who has decided to try his hand at Tигра trickery at the track, and to say that he has been reaping the rewards of his



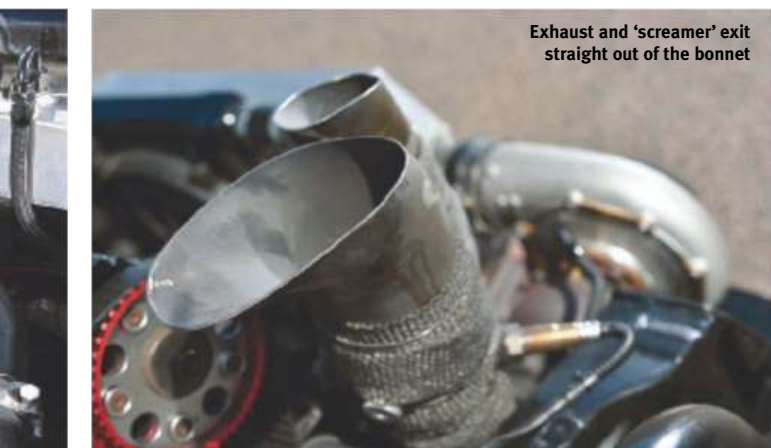
That little lot dishes out around 800bhp!



"I REMOVED A LOT OF METAL IN A BID TO REDUCE OVERALL WEIGHT, AND I REPLACED THE ENTIRE FRONT END OF THE CAR WITH A SINGLE-PIECE FIBREGLASS NOSE."



Flip front gives near-instant access to the oily bits



Exhaust and 'screamer' exit straight out of the bonnet

decision to use the cool coupe as his chariot of choice would be something of an understatement. "I used to compete along the quarter-mile strip at Santa Pod in a nitrous-fuelled Nova," he recalls. "I found it difficult to hold my own against some of the more potent machinery that the car would find itself up against, leading to the purchase and modification of the Tigra that I race with today," he adds, safe in the knowledge that his switch between Vauxhalls has delivered him not one, but two drag series championship titles to date.

Once a humble 1.6-litre runabout, Sam's Tigra found itself equipped with a turbocharged eight-valve

OWNER SAM BOLTON

AGE 29
JOB Bodyshop engineer
FIRST VAUXHALL A 1.2-litre Nova
FAVOURITE VAUXHALL This one
BEST THING ABOUT THE CAR It's quick!
WHAT'S NEXT? Preparing for the 2016 FWD drag series championship

DRAG TIGRA



lump shortly after it arrived at his Cambridgeshire residence in 2009. "I'd ditched the NOS system on the Nova and added forced induction in a bid to improve my quarter-mile times," he explains. "Eventually, I decided to retire the hot hatch, and I dumped its guts into the Tigra. At that time, the latter was still a road-legal vehicle, yet it was apparent that I'd need to dedicate it to track use if I was going to make the kind of progress that would secure victory in the competitions that I was hoping to conquer," he says.

ROAD ILLEGAL

Sure enough, the new arrival parted ways with roundabouts and zebra crossings in favour of a life attacking race-ready asphalt, and Sam began to transform the car's appearance into the monster that it is today. "Considering the small size of the model, it's quite heavy in its standard guise," he continues. "I removed a lot of what I considered to be supplementary metal in a bid to reduce overall weight, and I replaced the entire front end of the car with a single-piece fibreglass nose. Not only did this result in significant weight loss, but it also enabled me to reach the engine with ease thanks to a simple 'clip-on, clip-off' construction," he smiles.

That ease-of-access proved to be worth its weight in silverware following

TECH SPEC

ENGINE

C20NE block and crank, FCP Engineering X-beam connecting rods, Wössner forged pistons, ARP studs and bolts throughout, ACL race bearings, Z20LET cylinder head, Newman 288 camshafts, JSR alloy plenum and inlet manifold, front-mounted 'drag' manifold, Precision 6870 GEN2 ball bearing turbocharger, Precision 46mm wastegate, JSR 3.5-inch front-mounted intercooler, JSR oil breather tank, Megasquirt EFI standalone engine management, JSR radiator and header tank, Evans waterless coolant, two-gallon fuel cell, twin Bosch 044 fuel pumps, Turbosmart fuel pressure regulator, Denso 1600cc fuel injectors, AN8 Teflon braided fuel lines, Sunoco MaxNOS 119 race fuel, black nylon braided hoses

PERFORMANCE

Last season (2014) produced 716hp @ 2.2 bar, and 591 lb/ft. Now running 3.0bar, estimated 800hp
Best et last season (2014) 10.04
Best trap last season (2014) 152 mph

TRANSMISSION

Front-wheel drive, F18 four-speed Sapinho Cambios dog-engagement gearset, Quaife limited-slip differential, Ikaya sequential shifter, 7.25-inch Competition Clutch twin plate clutch, billet flywheel

SUSPENSION

AVO adjustable front coilovers with 600lb springs, GAZ adjustable rear coilovers with 1000lb springs, JSR adjustable rose-jointed front suspension arms, wheelie bar

BRAKES

Cavalier Turbo front calipers and discs, factory rear drums, JSR servo deletion, custom pedal mechanism, Wilwood hydraulic handbrake, Deist drag parachute

WHEELS & TYRES

9.5x10in Weld front wheels with M&H drag tyres, 3.5x10in Lenso Skinny rear wheels and tyres, wheel centres painted candy red, satin black outer rims, M&H rim screws

BODY

1995 Tigra, custom twin tone paintwork, flat underside leading to rear diffuser, drag rear wing, bespoke fibreglass one-piece front end, fibreglass tailgate, polycarbonate single-piece windows, sponsor graphics

INTERIOR

Stripped cabin, Kirkey alloy racing seat, TRS six-point safety harness, MSA rollcage, full dashboard and front carpet, false floor in passenger footwell to house fuel system, A'pexi AVCR boost controller

THANKS

Jay (my brother) for his involvement in building, driving and mapping the car, and to my sponsors: Sapinho Cambios, FCP Engineering, Precision Turbo and Competition Clutch



Some people question the need for wheelie bars on a FWD car... But it would more accurately be called a 'traction bar'

the discovery that the 'charged eight-valve that had served Sam so well in the past was reaching the end of its service life. With the Tigra taking the shape of a serious drag demon, a new powerplant was deemed necessary, although the resulting unit is less conventional than you might think...

Making use of the outgoing engine's C20NE block and crank, Sam introduced a Z20LET sixteen-valve cylinder head to the proceedings. His decision to double the size of the car's valvetrain initially saw him looking at C20XE and C20LET heads, but as the man himself points out, the newest Cavalier/Calibra Turbo lump is close to two decades old, whereas low-mileage Z20LET parts are available in abundance. In terms of future-proofing, it made perfect sense to opt for a Z-series head.

As you'd expect, this unorthodox machinery has undergone a number of changes since its inception, with sponsors supplying parts to help hike horsepower and improve reliability during each successive race season.

The engine's current DNA is made up of FCP Engineering X-beam connecting rods, Wössner forged pistons, ACL race bearings, ARP bolts, Newman camshafts and a Precision 6870 dual ceramic ball-bearing turbocharger, all of which have helped the car to produce an estimated 800bhp!

Fuelling is controlled by Megasquirt EFI standalone management, twin Bosch 044 fuel pumps, Denso 1600cc injectors and a Turbosmart fuel pressure regulator. Sunoco MaxNOS race fuel is fed to the engine via Teflon braided lines from a two-gallon fuel cell located beneath a false floor in the passenger side foot well. Further bespoke metalwork can be seen in the form of the car's giant front-mounted intercooler, its oil breather system and a trick alloy plenum with a matching inlet manifold.

CHANGING VROOMS

"The engine is constantly evolving. It's not a unit that remains in situ for very long before it is pulled out and disassembled, usually being bolted

“THE ENGINE IS CONSTANTLY EVOLVING. IT’S NOT A UNIT THAT REMAINS IN SITU FOR VERY LONG”



Grab this, and hold on tight!



back together with new equipment!” laughs Sam. The same can be said for his Tigrá’s transmission – an impressive affair comprising a four-speed Sapinho Cambinos dog-engagement gearset housed in a Getrag F18 case and joined by a Competition Clutch 7.25in twin-plate clutch, a Quaife limited-slip differential, a billet flywheel and an Ikeya sequential quick shifter.

Not that tuning gear alone is enough to guarantee success in the fast-paced world of drag racing. “Constantly being around the sport is as valuable to a competitor as building a fast car,” confirms Sam. “I’m always at Santa Pod, keeping tabs on what teams across different race series are doing to improve the performance of their vehicles. It’s a case of constantly monitoring the best practice of seasoned professionals and newcomers to quarter-mile motorsport, taking influence and tips that I can apply to the Tigrá in areas of the car that I think are open to improvement,” he admits.

While outright speed and



The interior is surprisingly complete for such a focussed drag car

DRAG TIGRA

Aerodynamics play a key role the faster you go



finely honed handling are traits often cited as the key to racing success, championships can also be won thanks to a participating car's reliability. As if to prove the point, Sam tells us of his momentous front-wheel drive drag series title win in 2014. "I faced stiff competition from the likes of Richard Batty and his Mitsubishi FTO – a car recognised as being the first front-wheel drive motor in the UK to achieve quarter-mile times in the eights. My Tigra might not have had the same pace, but it did have the security of

rock solid nuts and bolts, meaning that I was able to finish more races across the season than many of my rivals. It was this that enabled me to romp to victory and secure the title!" he grins.

BRAZILLIAN WAX

Sam and his top Tigra had already bagged a championship title win in 2011 before finishing as runner-up in 2012, but his efforts in 2014 encouraged new sponsors to join the party; FCP Engineering, Competition Clutch, Sapinho Cambios and

Precision are parts suppliers that are hoping to help Sam bag another trophy for his cabinet, although 2015 is being treated as a year of development and data analysis in advance of a serious crack of the whip in 2016. To that end, team Tigra was recently flown to Brazil on a sponsor-led fact-finding mission to witness front-wheel drive drag racing, South American style!

"The UK has a single front-wheel drive drag series, whereas the Brazilians can pick and choose between multiple classes in various

tournaments!" remarks Sam. "The trip was a real eye-opener, and I returned home with plenty of ideas that I'm looking forward to trying out on the Tigra," he beams.

It might be something of a rare breed, but the seldom-spotted Tigra is well and truly earning itself a reputation as a force to be reckoned with at the track. Bear that in mind if you're fortunate enough to spot one out on the public highway – you could be looking at a championship winning race car in waiting! 



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Astra J (MkVI)	£666.78	£600.11
Calibra	£625.05	£562.54
Corsa B	£593.74	£534.36
Corsa C	£666.78	£600.11
Corsa D	£666.78	£600.11
Insignia	£708.52	£637.67
Omega saloon	£750.26	£675.24
Signum	£677.22	£609.50
Tigra TT	£729.40	£656.46
Vectra B	£666.78	£600.11
Vectra C	£677.22	£609.50
Zafira A	£677.22	£609.50
Zafira B	£729.40	£645.46

BILSTEIN B4 DAMPERS

MODEL	FRONT	REAR
Nova	£42	£28
Corsa B/Tigra A	£42	£28
Corsa C/Tigra B	from £47	from £28
Astra MkI	£46	£36
Astra MkII	£46	£36
Astra F (MkIII)	£46	£36
Astra G (MkIV) hatch/sal	£47	£30
Astra H (MkV)	£65	£52
Zafira A	£74	£38
Zafira B	£42	£36
Cavalier MkIII	£47	£36
Cavalier GSi	£47	£44
Calibra	£47	£44
Vectra B	£49	£37
Vectra C ('01-'06)	£47	£38
Vectra C ('06-'08)	£74	£38
Omega	£77	£44

LMF CONVERSION PARTS



**Nova and Corsa
LMF motorsport
driveshafts £69**

Nova/Corsa B/Tigra/Astra MkIII 288mm four-stud discs, pair **£95**

Lightweight flywheels, made from billet steel

X20XEV, C20XE (Red Top) **£199**

C20LET, Z20LET, Z20LEH **£240**

C25XE, X25XE **£250**

VXR injectors **£109.95**

C20XE/LET steel head gasket **£22**

F28 2WD conversion kit **£49**

Anti-roll bar spacers **£17.50**

Corsa B rubber offside engine mount **£25**

C20XE 82°C cool-running thermostat **£20**

Z20LET 82°C cool-running thermostat **£20**

2.0 8v 82°C cool-running thermostat **£20**

C20XE power cap in red, blue or silver **£89.95**

**C20XE/LET
steel head
gasket £22**

**C20XE power
cap in red, blue or
silver £89.95**

**LMF motorsport
hubs £64.95 £37.50**

**Flywheels
from £199**

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NEWSFEED

All the latest from the world of Vauxhall/GM/Opel

ALL NEW ASTRA

VAUXHALL HAVE RELEASED DETAILS OF THEIR IMPRESSIVE 7TH GENERATION MODEL. WE TAKE A CLOSER LOOK...



The Astra is more than just a household name, with over 2.9 million sold in the UK over the last 36 years and over 50,000 sold last year alone. But that's not stopped Vauxhall from launching a completely new Mk7 to be built at the Ellesmere Port factory in Cheshire. The new Astra range, promises to not only be more roomy than previous versions, but also cheaper, more efficient, and, contrary to the trend of ever increasing waistlines, with smaller exterior dimensions than the preceding model.

The range includes some familiar names including the Design, Tech Line, Energy, SRi, and Elite, with

the 1.6 (200PS) SRi coming in at £20,435. Other engines include the 1.6 "Whisper Diesel" with 110-160PS, the impressive 1.4-litre ECOTEC (145PS) and the little 1.0 ECOTEC (105PS).

The all new vehicle architecture plays a major role in weight reduction with the car being, on average, 130kg lighter than its predecessor, which should go a long way to improving performance, handling and economy.

Externally it's significantly different to the Mk6, and while it may not exactly be particularly ground breaking in appearance, it's an undeniably handsome car, and one that you just know is going

to look great lowered over a set of wheels! The interior is particularly impressive, with some cool chrome trim, integrated display and some very nice looking seats which in top spec include 18-way adjustment, a massage function, ventilation and adjustable seat-width!

You'd expect a car such as this to be loaded with tech, and it certainly doesn't disappoint us there – options include: Traffic Sign Assistant, Lane Keep Assist, Lane Departure Warning, Following Distance Indication, Forward Collision Alert with Collision Imminent Braking, Cruise Control with Speed Limiter, Advanced Park Assist, Rear View Camera, and

Side Blind Spot Alert. There is also the option to equip the Astra with 'OnStar', which is a clever safety feature which, when an airbag is deployed, will activate. An advisor will then contact the vehicle to determine whether help is required. If there is no response, emergency responders are immediately sent to the exact location of the vehicle. The OnStar function also turns the Astra into a 4G mobile Wifi hotspot, enabling you to connect up to seven devices.

Speaking of devices the new IntelliLink function will also be making its debut. It's compatible with Android Auto and Apple CarPlay to give you increased

NEWS > SHORTS

*SURF'S UP

This is a Vivaro Surf concept – which on the face of it isn't particularly 'concept-like' other than being a van with a nice paintjob that you can chuck surfboards on the roof. Still, looks pretty cool, and with the 1.6 bi-turbo diesel with 340nm torque, it should go pretty well too. There are rumours of a limited edition model.





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www.performancevauxhall.co.uk

AT A GLANCE

- ★ Prices starting from £15,295
- ★ Range topping 200PS 1.6 SRI
- ★ 110-160PS diesel options
- ★ New OnStar and IntelliLink functions
- ★ Cheaper and lighter than outgoing model
- ★ Increased interior space
- ★ Huge list of safety options



The interior looks particularly impressive. It's loaded with 'toys' too



We've no doubt the usual detractors will moan – but we think it looks very smart



The C-pillar treatment is a nice touch, giving the car a 'floating roof' appearance

control and connectivity with your smart phone. Android Auto is built around Google Maps, and the ability to talk to Google, as well as an ever expanding audio and messaging app ecosystem that includes WhatsApp, Skype, Google Play Music, and Spotify. Apple CarPlay takes the iPhone features you'd want to access while driving and puts them on the vehicle's display, allowing drivers to make calls, send and receive messages and listen to music right from the touchscreen or by voice via Siri. All the functions can be controlled via the large, up to 8in touch-screen located high on the centre console, via remote control on the steering wheel (volume) or

via voice control. Let's just hope GM have made very sure it's secure, to prevent the unwanted hacking attempts that have plagued the 'internet equipped' Jeep Cherokee.

Along with the 5-door comes the Sports Tourer (Estate to you and me) which looks particularly good. It's got a huge 1,630 litres load capacity, with the flexibility of 40-20-40 spit



rear seats. The rear tailgate can be used with the 'Keyless Entry and Start' option with a rear sensor that both opens and closes the boot with a simple small kicking motion under the rear bumper. It's clever enough so as not to activate if it detects an obstruction.

As yet there is no official mention of either a 3-door GTC, or a VXR model as Vauxhall intend to run the current Mk6 GTC VXR alongside the Mk7. There are however, rumours of a 250bhp ST-rivalling GSi model, possibly in hatch and estate guises. We'll bring you official news as soon as we get it. For more details check out the Vauxhall website – www.vauxhall.co.uk

★BILLIONS!

The OnStar feature may be new to Vauxhall and to the UK (see Astra story above) but it's been going for nearly 19 years in America. Launched in 1996 GM have proudly announced that it has had its one billionth customer interaction. That includes 156 million mobile app requests, roadside assistance delivered 3.9 million times and more than 390 million vehicle diagnostic reports delivered.

★WRIGHT ON

Vauxhall love a bit of football sponsorship (something to do with the top brass loving the game) and they've recently signed up for their second four-year term as official Home Nations Football sponsors. The former England striker Ian Wright is the latest in a long line of 'footballists' to become a Vauxhall Ambassador, and he becomes the proud owner of an Astra VXR, the lucky fella!



GEAR

More great products and deals that we've tracked down for you.



AMD TUNING PACKAGE

AmD has just released a power upgrade package consisting of a performance remap and a Cobra Sport performance exhaust system. The new exhaust system uses larger diameter stainless-steel pipework and mandrel bent curves to improve gas flow, minimise back pressure and optimise throttle response. The AmD software remap then enhances these benefits and produces strong power gains. AmD Tuning also offer free fitting on all Cobra Sport Exhausts, or 10% off the price and free delivery if you mail order the exhaust. Furthermore, if you buy an AmD Tuning performance remap at the same time as a Cobra Sport exhaust you can have the remap at HALF the usual retail price! Contact AmD Tuning for further details.

PRICE POA

CONTACT AMD TUNING 01708 861827
WWW.AMDTUNING.COM



BILSTEIN ADAM DAMPERS

While the little Adam hasn't exactly been the success story Vauxhall hoped, it's not stopped the suspension maestros at Bilstein from releasing a range of dampers for the diddy hatch. You can opt for their B4 dampers, which, according to Bilstein are "perfect for anyone looking to refresh an earlier, or higher mileage car back to 'day one' condition", upgrade to a set of B6s which offer more damping capability which will translate into better handling without compromising ride comfort. Finally there is the B8 kit with shorter stroke for lowered cars.

PRICE B4 - £97 EACH
B8 - £130 EACH

CONTACT BILSTEIN UK 0116 247 8930 WWW.BILSTEIN.DE



ULTRA RACING CORSA D LOWER FRONT STRUT BRACE

Ultra Racing have released details of this lower front strut brace for all Corsa D models. Fitting neatly and easily to all variants, including the VXR, this bar is will increase the torsional rigidity of the car, which should improve handling both on road, and on track. The bar fits quickly and easily to the existing lower chassis pick-up points and is formed from a one-piece steel construction, making it more rigid than some other multi-piece designs. Each Ultra Racing bar is claimed to be more rigid and therefore more effective than many 'flexible' or multi-piece designs.

PRICE £133.67 **CONTACT** ULTRA RACING 01933 685840
WWW.ULTRARACINGUK.CO.UK



FOLIATEC CLEAR SPRAY FILM

Here's a novel idea – We're sure many of you have seen the coloured spray film Foliatic offer, which is a cheaper alternative to wrapping – But what if you want the protection of a spray film, but don't want to change the colour of your car? Well, Foliatic have just released this clear film spray, which they claim will protect paint, and hide swirl marks and minor scratches. If the finish does get damaged, just peel it off and spray some more on! Two thin coats and 30mins drying time and you're done. Foliatic even reckon it's car-wash and pressure-washer-proof! The large 400ml cans allow you to cover a decent sized area too.

PRICE 400ML £25

CONTACT WWW.FOLIATEC.CO.UK



COBRA SEAT

This is the new Cobra Players Classic Sports Seat. It's designed primarily to look right at home in any retro car, yet retains the comfort and support you'd expect from Cobra. The tubular steel framed seat is hand-finished and there are loads of trim options from the entry level vinyl and corduroy number which comes in at £349, right up to a high end black leather and houndstooth combo at a whopping £1109! Cobra's bespoke division are also happy to tailor the seat in whatever material you choose!

PRICE FROM £349

CONTACT WWW.COBRASEATS.COM



TESTED

TESTED BY MIDGE



AUTO FINESSE VISION GLASS POLISH

PRICE £11.95 (500ml) **CONTACT** www.autofinesse.co.uk

Relatively speaking, there's not many detailing companies that produce an actual glass polish and that makes this new product pretty interesting. Obviously a cream is more like something you'd use to clean your paintwork and the principle is exactly the same here. The only real difference is Vision isn't a normal abrasive polish, it cleans off the grime chemically meaning it's safe for use on tints and chrome films as well as normal glass. Spray-on cleaners typically contain a lot of solvents enabling them to evaporate to (hopefully) eliminate smearing, that's why many cheaper ones take more than their fair share of wiping for a clear finish. With a polish like this the product doesn't need to evaporate totally, it simply hazes over and you buff off the residue. One mistake people also make with a spray is using too much, you don't get that so much with a polish. Just whack a couple of pea-sized drops on your applicator pad and away you go.

VERDICT

Auto Finesse are an undeniable favourite on the UK show scene and it really shows that they listen to feedback and bring to market the products you ask for. I'll be the first to admit I thought it would be a lot more arsing around than using a



conventional spray bottle product but, considering how much buffing you have to do to get all the smears out with a spray, I actually found this much less effort. Vision hazes quickly and it's not like a wax where you have to put in some serious elbow grease to buff off the residue either – I like that a lot.

IN A NUTSHELL: Great value, excellent cleaning power, easy to use.

CORSA OPC

TWO TRIBES

Over in Germany, they do things very differently, often with spectacular results...

PHOTOS Sebastian Brüh





FAST FACTS

- ★ Z16LR with forged internals
- ★ TA Technic air suspension kit
- ★ 8.5x19in Advance Wheels AV1.0
- ★ Brembo 4-pot front calipers
- ★ Laquered-in dollar bills throughout

Bonnet and roof may look like they've
been vinyl wrapped – but they're
actually covered with leather!

CORSA OPC



If you want 8.5x19s to sit this far in the arches you're going to need both metalwork and air suspension!



Yup, that's a leather covered wing mirror. Madness!



It's easy to see the odd tweaked Opel, and think that we 'get' what the German tuning scene is all about. But the reality is that it's really quite different from what we're used to in the UK. There's a much bigger distinction between owners who are all about power and speed, and those who want an out-and-out show car. We tend to blur the lines a little over here, and most of the cars you see featured in *Performance Vauxhall* are cool amalgam of both show and go – but flick through the pages of a German Opel tuning magazine, and while some of the cars are rather familiar feature car fodder, some look

like mutated outcasts from the 90s, with big crazy bodykits, lashings of chrome tat, and airbrushed murals of skull-faced mermaids writhing around a slightly misshapen image of Patrick Swayzee. But there are an increasing number of German tuning fans who are keen to distance themselves from the mural brigade, yet still want a car that is capable of both snapping knicker elastic at 20 paces, and delivering the goods in the performance department.

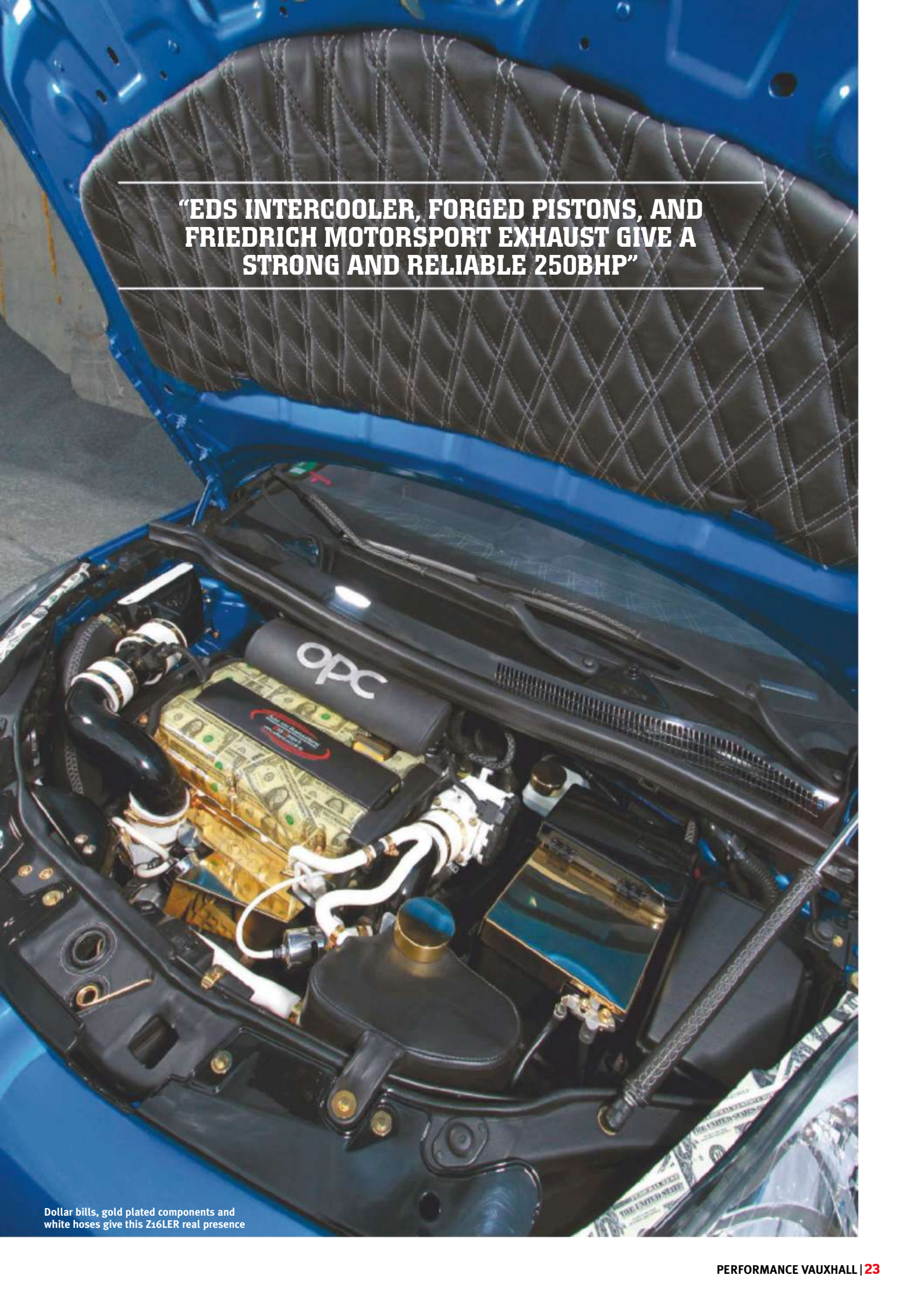
EMERGENCY FLARE

One such individual is Christian Theegarten, who's made a point of distancing himself from any particular



'camp'. The 33 year old master mechanic has gone all out to take the best of both worlds to create his ideal Corsa OPC (their variant of the VXR).

Aside from the obvious crazy drop and big wheels, from a distance Christian's Corsa OPC looks relatively subtle – some might even be tempted to label it as OEM+, what with the Nurburgring Edition splitter, and textbook Arden paintjob. But look a little closer, and it's clear that it's anything but OEM. For a start off the wings have been flared with the bumper mounts modified to match, giving the Corsa an extra dose of aggression – something the standard car isn't exactly lacking!

The image shows the engine compartment of a blue Vauxhall Z16LER. The engine is heavily customized with gold-plated components, including the intake manifold and various fittings. White braided hoses are connected to the engine. A black air filter with 'opc' written on it is visible. The engine bay is painted blue to match the car's exterior. The hood is open, revealing a black quilted leather-like interior. The text '“EDS INTERCOOLER, FORGED PISTONS, AND FRIEDRICH MOTORSPORT EXHAUST GIVE A STRONG AND RELIABLE 250BHP”' is overlaid on the image.

**“EDS INTERCOOLER, FORGED PISTONS, AND
FRIEDRICH MOTORSPORT EXHAUST GIVE A
STRONG AND RELIABLE 250BHP”**

Dollar bills, gold plated components and white hoses give this Z16LER real presence

CORSA OPC

Rear diffuser is also leather coated – something tells us this isn't Christian's daily driver



And then there's Christians choice of 'covering'. Not content with a paint job or a simple wrap – Christian's has had the bonnet, roof, rear diffuser and mirrors trimmed in leather! Now we're not going to lie, when we first heard that it has us wincing in disbelief – but the reality is that it actually looks pretty good, and while it isn't something we'd be rushing out to get done, it definitely adds an extra dimension to this Corsa.

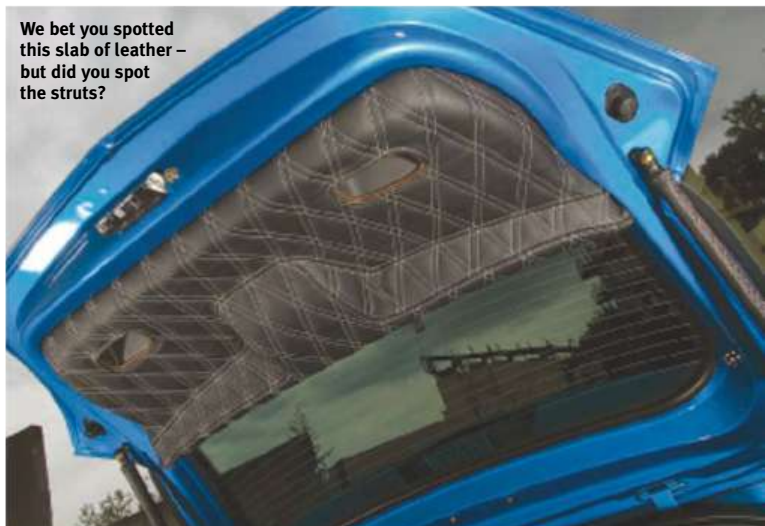
DOLLAR BILL Y'ALL

Over here hydro-dipping is gaining in popularity, but Christian ignored the 'simple' route to getting a distinctive finish and went so far as to get actual dollar bills and laminate them over strategically chosen components both in the engine bay, and on the exterior.

It's another bold move that could have gone oh so wrong, yet manages to keep just on the correct side of 'oh so right' – including on the inner rims of the 8.5x19in AV1.0 alloys! There's a lot to appreciate on this Corsa, even if you're not about to replicate the whole car there's certainly a feast of imaginative touches.

And speaking of dollars, there's certainly been a few dollars spent in getting this hot hatch to where it is today. One large expense is on the suspension system. Simple coilovers would never have sufficed, so instead Christian has opted for components sourced from the Berlin-based air suspension experts at TA-Technix. They've tailor-made one of their air-ride systems which, we're assured, rides and handles a lot

We bet you spotted this slab of leather – but did you spot the struts?



"CHRISTIAN'S HAS HAD THE BONNET, ROOF, REAR DIFFUSER AND MIRRORS TRIMMED IN LEATHER!"

TECH SPEC

ENGINE

Z16LER, EDS intercooler. Forged JE Pistons and con rods, Klasen software, all bolts and hose clamps gold plated, white silicone hoses, laminated engine cover with actual US dollars, various parts leathered, Friedrich Motorsport exhaust system with plated tailpipe

SUSPENSION

Full TA Technix-air suspension kit

WHEELS/TYRES

8.5x19in Advance Wheels AV1.0 wheels painted in gloss black and inner rim with US Dollar finish, Hankook Ventus S1 Evo tyres in 215/35x19, shotgun shell wheel nut covers

BRAKES

Brembo 4-piston calipers, uprated pads

INTERIOR

Recaro Sport seats, rear seats and dashboard retrimmed in leather, floor mats and first aid kit also in leather, headlining black Porsche Alcantara with OPC lettering, various parts (dash, door panels etc) painted in gloss black, central display with US dollar motif, integrated additional dials for air ride pressure, carbon inlays on door handles, Multimedia ZE-NC2011D headunit, Kenwood amplifier, Emphaser EX10T-G5 subwoofer and Hifonics monitor

EXTERIOR

Nürburgring Edition front spoiler lip, front wings flared by 30mm, widened rear wings by 10 mm, smoothed front bumper and widened bumper mounts, fog lamps housing and Opel badge laminated with dollars, mirrors, rear diffuser and petrol flap covered in leather, roof and bonnet trimmed in leather, leathered wipers (!), Dectane LED rear lights



CORSA OPC



better than common perception would have you believe.

One area that no one's questioning is in the engine department, where the 1.6 Z16LER has been warmed over with a Klasen remap. This complements the EDS intercooler, forged JE pistons, and Friedrich Motorsport de cat exhaust system to give a strong and reliable 250bhp.

Stopping that 250bhp is a beefy set of Brembo four pots painted in a contrasting bright red hue. The equally red factory rears will suffice for now, but there are plans for more power, and we suspect bigger brakes will follow.

DIAMOND BACK

It goes without saying that Christian has followed through with his special blend of modifying madness to the interior. First up notice the familiar Recaro seats are slightly less familiar thanks to addition of some very neat retrimming. The same black leather and diamond stitching can be found on the door cards, the rear seats, boot lid, and even under the bonnet. Not content with that, the floor mats, and even the first aid kit have been expertly retrimmed. The headlining is, as you'd no doubt expect, pretty special too – black Alcantara with the OPC logo embossed into it. Gloss black paint is also in abundance in the cockpit, and the contrast of the matt leather and gloss finish works brilliantly to enhance



both the hard materials and the soft furnishings.

As no show car is complete without a multimedia install, this too has been comprehensively upgraded with the likes of Emphaser, Hifonics and Kenwood coming along to the party.

Just look at it – this is no thrown together affair, this is modifying detail at its finest.

So while there are many differences between our tuning culture and the theirs – it's pretty clear that we can learn a lot from the Germans – maybe not when it comes to airbrushed mermaids, but definitely with the levels of attention to detail, and most of all that they dare to be different! ☺



The contrast between the leather and gloss black paintwork is spot on



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DYNO

On the rolling road this month...

HIGHLIGHTS

HIGHEST
579 BHP

LOWEST
275 BHP



Z20LET LOVERS DYNO DAY

PHOTOS Ricky Neal

When the well known Facebook group decided to get a RR day together we had to take a closer look...

Facebook group 'Z2oLET Lovers' admins Carl Scrivens, Rix Sidhu and Jo Sheridan decided it was time to organise a rolling road day for 2015 for the group. Teaming up with Dan Newman, the owner of Flow Dynamics, and official Z2oLET Sponsor, meant they were able to organise a rolling road day for members on their brand new state of the art Dyno Developments dyno.

Carl operated the rollers alongside

Dan and Matt from Flow Dynamics, while Rix and Jo assisted by rounding up cars ready to run.

Members from around the country made an appearance for this event including Andy Carr from Norwich (his GSi ran an amazing 579bhp), and members even came from as far afield as Dorset, making the long drive up to meet other members and enjoy a great Vauxhall day out.

Other sponsors of the group such as NKK Turbos also made an appearance

to show support and ran their new test car on the dyno to show off their newly developed turbos.

The turnout was great, and as expected a wave of Arden Blues took over the event and proved to be the most dominate colour out of the selection. Along with the dominant GSis, SRi Turbos and VXR's also made an appearance for the event and a special appearance from Kris Mitchell in his mint Nova C2oLET (Yup a C2oLET invaded a Z2o day).

The group has grown since first being established in 2013, making a name in the Vauxhall scene, hitting shows such as PVS each year, and welcoming all Z2o engine types. Find out more and check out the group on Facebook by searching for 'Z2oLET Lovers'

CONTACT

Search for 'Z2oLET Lovers
on Facebook





TOP COMMENT

"Needs gearbox - Where's second gear?"



12th INNES DEAL | 275BHP | ASTRA VXR



ENGINE Stage 2 Ko6, high flow inlet, TX intercooler, SM map
CLAIMED 305bhp
ACTUAL 275bhp & 288lb/ft
OPERATOR Dropping boost, actuator needs setting up.
OWNER Fitted recently, I'll get it set up!



11th RYAN RODGER | 313BHP | ASTRA SRI



ENGINE TD Ko6, VXR injectors/AFM, TX intercooler, EDS inlet, Courtenay top hat
CLAIMED 310bhp
ACTUAL 313bhp & 370lb/ft
OPERATOR Comes on boost very well.
OWNER Happy!



10th KRIS MITCHEL | 320BHP | NOVA LET



ENGINE C20LET, Ko6 turbo
CLAIMED 320bhp
ACTUAL 319.7bhp & 306lb/ft
OPERATOR That's a fast little Nova.
OWNER No comment, just a smile!



9th RICKY NEAL | 321BHP | ASTRA VAN



ENGINE Forged, GT28, FMIC, EDS inlet, 3in exhaust
CLAIMED 340bhp
ACTUAL 321.1bhp & 372lb/ft
OPERATOR Needs injectors, and map.
OWNER Will be track van next year!



8th NIGEL RUSSELL | 324BHP | ASTRA SRI



ENGINE Forged, Omega pistons, EDS inlet, billet turbo
CLAIMED 325bhp
ACTUAL 324.1bhp & 366lb/ft
OPERATOR Pulls well, pulls fast.
OWNER Happy with the result.



7th DANIEL MURRAY | 325BHP | ASTRA SRI



ENGINE Forged, Ko6 turbo, Milltek, custom intercooler, SM Tuning map
CLAIMED 297bhp
ACTUAL 325bhp & 420lb/ft
OPERATOR Needs 'box! Where's 2nd gear??
OWNER Yeah second gear's missing!



6th RIX SIDHU | 325BHP | ASTRA GSi



ENGINE Forged, ported head, EDS inlet and top hat, Ko6, 3in exhaust
CLAIMED 280bhp
ACTUAL 325bhp & 318lb/ft
OPERATOR Pulls well, comes on boost quick.
OWNER Impressed with that considering it needs remapping.



5rd JOJO SHERIDAN | 361BHP | ASTRA GSi



ENGINE Forged, Turbo Dynamics Stage turbo
CLAIMED 275bhp
ACTUAL 361bhp & 401lb/ft
OPERATOR Pulls very hard very fast, very quick car on road.
OWNER Shopping car strikes again.



4th ROSS HART | 403BHP | ASTRA SRI TURBO



ENGINE Forged, TDo5 turbo, EDS Inlet, FMIC
CLAIMED 380bhp
ACTUAL 403.5bhp & 419lb/ft
OPERATOR Misfire at 5k revs.
OWNER Needs remapping.



3rd CARL SCRIVENS | 480BHP | ASTRA GSi



ENGINE Fully forged, Piper cams, EDS Inlet, GTX2867, external fuel pump
CLAIMED 450bhp
ACTUAL 480.2bhp & 470lb/ft
OPERATOR Picks up fast and holds power to the limiter.
OWNER Can't complain.



2nd KARL DOBBS | 570BHP | ASTRA GSi



ENGINE Fully forged, GT2876, EDS Inlet, FMIC
CLAIMED 501bhp
ACTUAL 570bhp & 545lb/ft
OPERATOR Impressive. Picks up fast and holds well.
OWNER Didn't expect that!



1st ANDREW CARR | 579BHP | ASTRA GSi



ENGINE GTX3076R, Meth inj, forged engine, cams, FMIC
CLAIMED 550bhp
ACTUAL 579.1bhp & 472lb/ft
OPERATOR Fast!
OWNER Happy with that.



Wanna play?

If you're running a rolling road day with AT LEAST 12 non-standard cars, then let us know:
performancevauxhall@kelsey.co.uk

NOVA FUN



FAST FACTS

- ★ Nova GSi engine and gearbox conversion
- ★ AVO GTX coilovers
- ★ Powerflex bushes
- ★ Speedline Alessio 2 wheels
- ★ Custom leather interior



fun factor

Nathan Powney's GSi-powered Nova Fun does exactly what it says on the tin, and it proves that love for Vauxhall's classic hot hatch is as strong as it ever was!

WORDS Dan Furr PHOTOS Michael Whitestone



If there's one Griffin that you can rely on to remain popular regardless of scene trends, fashions or fads, it's the trusty Nova. We've reported on heavily tuned, mildly modified and sensationally styled specimens of this awesome hot hatch (and its rarer saloon-shaped variant) over the years, and it comes as no surprise to us to discover that almost every Nova feature car pilot that we speak to has owned multiple examples of what is arguably the greatest supermini to wear a Vauxhall badge.

Fuel station design engineer, Nathan Powney, is a case in point, and he can even lay claim to being the owner of a Nova overhauled by Norfolk tuning firm, Courtenay Sport. "The car was a stock 1.6-litre GSi before the guys at Courtenay worked their magic on it," he explains. "They carried out one of

their famous forced induction conversions before an RJ Automotive body kit, a major ICE install, a loud exhaust and big wheels were added to the mix," he says.

FUN FACTORY

The pearlescent green street star soon found itself in the spotlight thanks to a feature in the sadly-now-defunct *Redline* magazine, although this wasn't Nathan's first foray in the world of Nova ownership. In fact, he's owned four to date, each a different special edition. "The aptly-named 'Fun' that I'm in possession of right now is actually the second Nova that I bought after passing my driving test," he tells us. "The Courtenay-fettled GSi came later, after I decided to treat the Fun to a restoration," he adds, confirming that the green machine was enlisted as his daily driver while the project





It may not have ball-busting power, but it looks utterly fantastic

TECH SPEC

ENGINE

E16SE 1598cc 8-valve, block painted black, ported and polished cylinder head, polished cam cover, K&N panel filter, stock GSi exhaust manifold, 2in Powerflow stainless steel exhaust system with 3.5in outwardly rolled tailpipe, stock GSi fuel injection system and ECU, Iridium spark plugs, Bailey header tank, stainless washer reservoir, Roose Motorsport silicone hoses

POWER

100bhp @ 5600rpm (estimated), overall weight: 900kg

TRANSMISSION

Front-wheel drive, five-speed GSi manual gearbox, lightweight clutch, short shift linkage

SUSPENSION

AVO GTX coilovers, ride height lowered approximately 70mm (front) and 90mm (rear), OMP front strut brace, Nova GSi anti-roll bars, front hubs, arms and rear beam powdercoated black, Powerflex polybushes throughout

BRAKES

Nova GSi front calipers and rear drums, GSi servo, Brembo drilled and grooved performance discs, Brembo pads, Goodridge braided hoses

WHEELS & TYRES

7x16in Speedline Alessio 2 alloys refurbished and painted Volvo Grey, Opel GSi centre caps, 30mm (front) and 25mm (rear) wheel spacers, Toyo Proxes T1-R 195/40x16 tyres

BODY

1992 Nova Fun, full respray in

Lamborghini White, underbody cleaned and resealed, Nova GSi front and rear bumpers painted Volvo Grey, semi-wide CID Design wheel arch kit, inner wheel arches boxed and widened, smoothed doors, louvered bonnet, smoothed scuttle panel, Mk1 Nova semi-smoothed tailgate, GSi spoiler, tinted red rear light clusters, GSi window surrounds, flocked single windscreen wiper, Opel wind deflectors, fuel cap relocated to door shut

INTERIOR

Nova GSi black dashboard and plastics, leather-trimmed GSi seats with silver piping, leather door cards and rear quarters, painted boot cover, Mk1 Nova dark grey carpets, black parcel shelf, black headlining and sun visors, OMP steering wheel, Mk2 Astra GTE digidash, flocked door handles, Corsa B windscreen wiper and indicator stalks, OMP gearknob, leather handbrake gaiter, Sparco pedals, LED interior light conversion

ICE

False boot floor housing Black Widow 750w amplifier, Alpine MP3 head unit, Fli 1in tweeters, Kicker 5in front speakers, JVC 3-in rear speakers, Sony XPlod 12in subwoofer in custom boot box

THANKS

My parents and brother for all their help and support with the project, Kelly Bond for giving me the time to get the car finished, Jason Gwynne and Luke Browning for their help and advice, Ultimate Audio for the great detailing work, and to Waboo Automotive for the interior updates.

"I DIDN'T REALLY HAVE A PLAN OF ACTION OTHER THAN TO REPLACE OLD PARTS FOR NEW WHERE POSSIBLE"

progressed further.

A standard example bought for just £250, the Fun was in far better condition than Nathan's first car (yes, that was a Nova too!), encouraging him to use the 1.2-litre pocket rocket as the subject of what would become a lengthy labour of love. Not that he didn't get his kicks out of it before the dismantling started – two years of commuting to work and back in the Fun preceded its deconstruction and the purchase of the GSi.

"I noticed that the Fun's wheel

arches and sills were beginning to show their age," continues the 28-year-old from Herefordshire. "It was that discovery that signalled the start of the build. To be honest, I didn't really have a plan of action other than a desire to replace old parts for new wherever possible, although I was adamant that wide wheel arches would be applied to the car's refreshed bodywork," he admits.

The Fun was stripped to a bare shell as planned, yet the project didn't adopt a firm direction until a



Common they may be, but with very good reason



Neat retrim really lifts the class of the interior



second GSi (a Vauxhall owned by one of Nathan's friends) offered itself up as a parts donor. "My intention was to restore both Novas, but it soon became clear that the latter was beyond saving," sighs Mr Powney. Indeed, some poking and prodding proved that the car's floor was about to give way following years spent parked up on wetland – the ideal setup for Fred Flintstone, but not for our man in Credenhill

Instead, the rotting GSi's model-specific trim, E16SE engine and five-speed manual gearbox were removed for use on the project car. By this time, the Fun's aging sills had been replaced by fresh metal, while fibreglass CID Design wheel arches that are an inch-and-a-half wider than the factory panels, that they replace, were expertly fitted with the Nova on Nathan's mum's driveway (along with a smoothing of the car's door handles, rear quarters, scuttle panel, tailgate and the relocation of its fuel filler into the nearside door shut).

Paint, however, was applied at a local bodyshop. "I wanted a pure white. The guy who was charged with spraying the car suggested a

Lamborghini colour that was up to the job," says Nathan. "I agreed after seeing a test pot, and I asked for my car's restored shell and its newly-acquired GSi body parts to be covered accordingly. Meanwhile, I decided to make use of a set of Porsche 930 alloys that I had kicking around. The flat multi-spokes were painted silver before being added to my ever-growing parts pile!" he grins.

IT'S NOT ALL WHITE

Following their time in the spray booth, a trial fit of the whiter-than-white bumpers made the car look more like an entry-level Nova 'Club' than an aggressive GSi. This was less than satisfactory, and resulted in consultation with Nathan's brother, a panel beater who had suggested the use of a shade of grey lifted from the Volvo paint catalogue.

Sure enough, the bumpers and Porker rims were soon being treated to a coat of the Swedish tint. They looked fantastic alongside other exterior updates including a louvered bonnet, but as with so many Nova owners, Nathan couldn't resist the temptation to buy a set of





"I WAS ADAMANT THAT WIDE WHEEL ARCHES WOULD BE APPLIED TO THE CAR'S REFRESHED BODYWORK"

Subtlety is most definitely the key with this one



OWNER
NATHAN POWNEY

AGE 28

JOB Fuel station design engineer

FAVOURITE VAUXHALL Astra J VXR

BEST THING ABOUT THE CAR The wide wheel arches

WHAT'S NEXT? A C20XE engine conversion



It may not be the quickest A-to-B car, but we bet it's a load of fun

Speedline Alessio 2 16-inchers. Of course, we don't blame him – they might have appeared on small Vauxhalls so many times that the uneducated would be forgiven for thinking that these wheels were a factory cost option, but it's plain to see that the appearance of almost every Nova can be greatly enhanced by this classic five-spoke design.

The Performance Nova Group arranged a discount-friendly order of AVO GTX coilovers that Nathan was only too happy to take advantage of, and he has also added to his car's improved suspension by applying the donor GSi's anti-roll bars and a selection of Powerflex polyurethane bushes. An OMP strut brace tightens the front end even further, an area that now houses the rotten GSi's perfectly serviceable eight-valve powerplant.

HIGH STANDARDS

"The donor car supplied a Powerflow stainless steel exhaust system," smiles Nathan. "Other than that and a K&N panel filter, the engine is pretty much as you'd expect from a GSi, although I've added polished fluid tanks, a matching cam cover and Roose Motorsport silicone hoses in an effort to improve the appearance of the car's engine bay, now that the 1.6-litre lump is in place," he says.

It's not just this Nova's under-bonnet components that benefit from well executed cosmetic updates; the Vauxhall's interior is decked out with black plastics and a corresponding dashboard housing a Mk2 Astra GTE

digidash. The car's cabin also boasts a set of re-trimmed Recaros removed from the long-gone Redline feature GSi. Finished in black leather with silver piping, these super seats suit the Fun down to the ground, and they're joined by matching door cards and inside rear quarter panels.

A common feature of the modified Novas of yore was a big boot build, but advances in technology mean that audiophiles no longer need to rely on massive subwoofers and trillion inch speakers to get the best out of their in-car entertainment systems. As if to prove the point, Nathan – a long time ICE enthusiast – has positioned a modestly-sized amplifier into his Fun's spare wheel well, covering it with a false floor beneath a 12in Sony XPlod subwoofer in a bespoke housing. Kicker, Fli and JVC speakers combine to deliver exceptional sonic quality, even if the nearby centre console's factory-issue cassette holder suggests that a vintage head unit might still be in use!

And so we arrive at the Performance Vauxhall Show of 2015, where Nathan and his fantastic Fun first caught our attention. The car was well received by the heaving masses in attendance, and the announcement of an imminent C20XE conversion and big brake kit leaves us excited for the future of this great Griffin. Not that we need to worry – as history has proven time and time again, Novas will remain popular no matter what the modified motor scene has in store. Expect us to be writing about Vauxhall's classic hot hatch for a very long time to come! ☺



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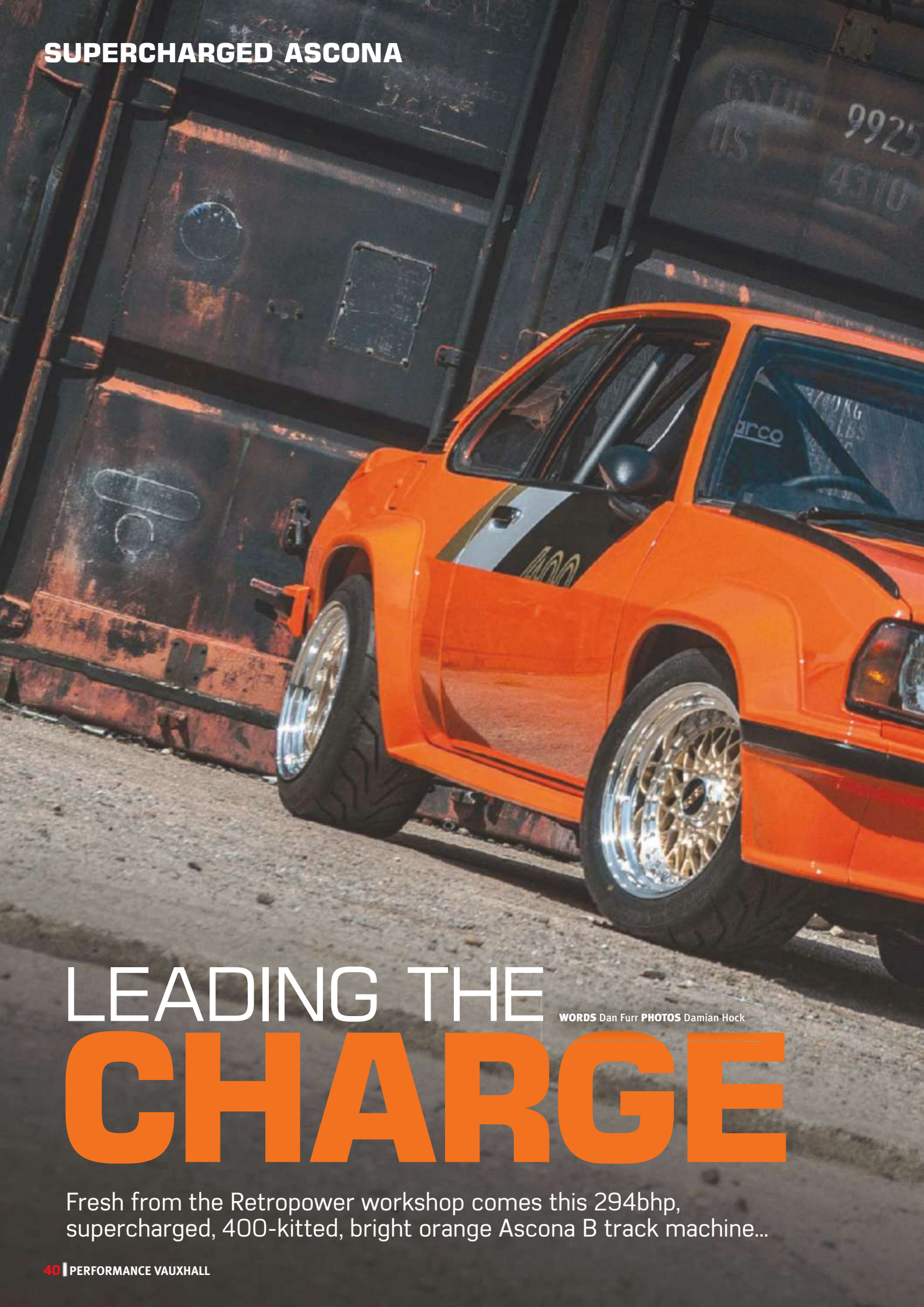


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SUPERCHARGED ASCONA

LEADING THE **CHARGE**

WORDS Dan Furr PHOTOS Damian Hock

Fresh from the Retropower workshop comes this 294bhp, supercharged, 400-kitted, bright orange Ascona B track machine...

FAST FACTS

- ★ Fully rebuilt C20XE
- ★ Eaton M90 supercharger
- ★ Modified '400' bodykit
- ★ Bilstein Group 4 coilovers
- ★ BBS RS multi-spokes



SUPERCHARGED ASCONA



Supercharger installation required a bespoke water-to-air chargecooled inlet manifold



OWNER JASON JOHNS

AGE 43

JOB Marketing assistant at
Demon Tweaks

FIRST VAUXHALL Mk1 Astra 1300

FAVOURITE VAUXHALL Either the Mk1
Astra or the Firenza

BEST THING ABOUT THE CAR The fact
that it's mine!

WHAT'S NEXT? A Wilwood four-piston
brake kit

Talk about a coincidence! Imagine losing touch with one of your mates before catching up with him ten years later, only to discover that he's in possession of the very same model of car that you've got tucked away in your garage. Then consider how remarkable it would be if the model in question was a right-hand drive, two-door Ascona B – one of the rarest

Opels to be found on British shores.

"I couldn't believe it!" gasps Wrexham resident, Jason Johns, a man who found himself in this exact scenario. "The odds of us both having a surviving example of a genuine UK-issue Ascona must have been stacked to the sky!" he laughs. The two cars were in dramatically different states, however, a fact that was highlighted during the VBOA National Rally at Billing Aquadrome in 2011.

"My mate's car had just been

released from the workshop of Vauxhall restoration and tuning outfit, Retropower," continues Jason. "The firm is operated by Opel nuts, Callum and Nat Seviour, and the lads had completed the transformation of my friend's Ascona from a rust-ridden mess into a pristine 400 rally replica for the road. The VBOA show acted as the finished car's grand unveiling, while the tired rolling shell of my ride was parked up alongside it in order to provide punters with a 'before and after'

demonstration of Retropower's work," he adds.

RETIREMENT AGE

Jason bought his Ascona back in 1999. It was used as his daily driver for twelve months until he decided to retire it from the road due to a need for a four-wheeler capable of handling the huge number of miles that he was clocking up each day. "The car's factory 1.6-litre lump and four-speed gearbox weren't coping well with heavy use,



Fitting an Eaton supercharger to the XE wasn't without its issues

"I WANTED A CAR THAT WOULD BE WILLING TO DELIVER CLOSE TO 300BHP"



There's no doubting the quality of Retropower's workmanship

and I couldn't help but notice that the engine was burning a lot of oil," he recalls. Recognising that his Opel was reaching the end of its service life, he parked it in his workshop where it would collect dust until the Billing outing almost twelve years later.

The quality of work carried out by Retropower encouraged Jason to leave his Ascona in the capable hands of the Seviour brothers with an instruction to use the rolling shell as the foundation for another 400 replica. "I'd always

dreamed of owning a white 400 with the model's signature black and yellow graphics plastered down each side, but I didn't want to end up with a clone of my friend's car," explains the 43-year-old Demon Tweaks marketing assistant. "I faced some tough decisions regarding the appearance and technical specification of my Ascona, although a graphic designer friend made my life a little easier by loading an image of a 400 into Photoshop in advance of showing me renders of the vehicle in

various colours and with a range of different wheel designs," he says.

CHARGING POINT

An unexpected suggestion of bright orange paintwork and BBS RS multi-spokes with gold centres and polished lips had Jason jumping for joy. Furthermore, time spent behind the wheel of an ex-works Group N Mk2 Astra rally machine convinced him of the merits of turning his Ascona into a track warrior, and he promptly

discussed the powertrain options at his disposal with the Retropower boys.

"I wanted a car that would be willing to deliver close to 300bhp," he continues. "Nat had undertaken a significant amount of research and development work with regard to supercharging a C20XE that he was intending to install in a grass racer. The project failed to materialise due to his ever-increasing workload, but my Ascona provided the perfect opportunity to attend to



SUPERCHARGED ASCONA



“AFTER STRIPPING AND BLASTING THE SHELL, WE REPAIRED OR REPLACED ALMOST EVERY PANEL”



“unfinished business!” he smiles.

An Eaton M90 blower, lifted out of the engine bay of a four-litre, six-cylinder Jaguar XJR, willingly donated itself to the project, and it was soon bolted onto a fully-rebuilt ‘Red Top’ comprising Wiseco low compression pistons, Farndon steel rods and a custom sump. A standard cylinder head containing stock camshafts was decorated with a crackle-black cam cover, while the increased airflow demands of the pokey powerplant were addressed by the inclusion of a Jenvey throttle body and the creation of a bespoke four-into-one exhaust

manifold mated to a 2.5in stainless steel exhaust system.

HARD LABOUR

DTA S40 engine management, VXR injectors (and a matching fuel rail), a Bosch 044 fuel pump, Aeroquip fuel lines and a boot-mounted swirl pot were added to a list of performance parts intended to keep the engine fed with a plentiful supply of happy juice. The nuts and bolts were forming an impressive parts pile, but time spent dealing with the mechanical aspects of the build paled in comparison to the hours invested in perfecting the car’s

bodywork. In fact, Callum tells us that over 300 hours were spent stripping, blasting, repairing and remanufacturing the Ascona’s metal!

“Jason’s Ascona was original insofar as we couldn’t find any signs of previous welding work,” he confirms. “That said, the car’s floor was rotten, its inner and outer wings were corroded, and surface rust blisters were bursting through faded blue paintwork. After stripping and blasting the shell, we repaired or replaced almost every panel; the front end, valance, wings, back panel, floor pan, boot floor, sills and chassis rails were all in need of a

new lease of life. We also added a solid roof skin that did away with the factory sunroof,” he says.

The Opel’s rear wheel arches were cut out before its inner arches were tubbed in order to accommodate the fat BBS rims that Jason had managed to source. Further cutting took place up-front, where triangular bonnet vents were added before the application of a full 400 bodykit. “Getting a kit like this to sit pretty isn’t as easy as it might seem,” stresses Callum. “We applied the individual components to the freshly prepared shell, and then built them up with fibreglass while they were



A satisfying blend of luxury and race car



Freshly restored 15in BBS RS alloys are just perfection



It'll come as no surprise that the underside is so immaculate

attached to the car's body. It was a drawn-out process, but it ensured that every piece of the kit was a perfect fit, and it enabled us to combine parts for a smoother finish," he adds, referencing the rear arches, Manta GT/E side skirts, and front flares that were moulded into a single piece each side before being separated with clean cuts.

PERFECT PAINT

A coat of RAL 2009 (that's 'bright orange' to you and I) was applied to the completed bodywork before the supercharged engine, a Getrag 265

transmission with a Ford Type 9 bellhousing and adaptor plate, a Salisbury 4HA rear axle and diff, a quick steering rack and Corsa electric power-assisted steering were installed. Bilstein dampers with Group 4 rear coilovers joined a five-link suspension setup, while braking power was enhanced by Calibra Turbo 4x4 front calipers with modified Sierra Cosworth discs, Mk4 Astra rears and an adjustable bias pedal box.

The Ascona's cabin is a straightforward 'race car' affair thanks to a rear bench deletion, an OMP rollcage, a MOMO Prototipo

TECH SPEC

ENGINE

1998cc C20XE DOHC 16-valve, bare block rebuild, Wiseco low comp pistons, Farndon steel connecting rods, Retropower sump, crackle-black cam cover, custom spark plug cover, Eaton M90 supercharger painted VW Platinum Grey, Retropower water-to-air chargecooled inlet manifold, dedicated chargecooler coolant system, electric chargecooler pump, supercharger bypass system using Turbosmart wastegate, Jenvey throttle body, Retropower 4-2-1 manifold & 2.5in stainless steel exhaust system, DTA S40 ECU, Bosch 044 fuel pump, fuel filters and external swirl pot, -6 Aeroquip fuel lines with black nylon finish, adjustable FPR, VXR 440cc injectors and fuel rail, GRP4 Fabrications alloy rad with Spal fan, Retropower coolant hoses

POWER

294bhp, 235lb/ft torque

TRANSMISSION

Rear-wheel drive, Getrag 265 'dogleg-first' gearbox, Salisbury 4HA axle with limited-slip differential, quick steering rack, Corsa electric power assisted steering with adjustable assistance controller

SUSPENSION

Bilstein front dampers with 400lb springs, Bilstein Group 4 rear coilovers with 180lb springs, rear axle fully five-linked with heavy duty rose-jointed link bars, SuperPro polybushes

BRAKES

Calibra Turbo 4x4 front calipers with machined and re-drilled Sierra Cosworth discs, Mk4 Astra rear calipers and discs, adjustable bias pedal box with master cylinders behind dash, -3 Aeroquip brake hoses

with black PVC coating, brake plumbing hidden from engine bay

WHEELS & TYRES

8x15in (front) and 10x15in (rear) BBS RS multi-spokes with polished lips and powdercoated gold centres, custom barrels and outer rims, new BBS bolts and caps, Toyo Proxes R888 225/45x15 tyres

BODY

Two-door Opel Ascona shell stripped and restored, full respray in RAL 2009 orange, replacement panels throughout (front end, inner wings, outer wings, floors, rear panel, roof, doors), '400' bodykit modified to create split front bumper, modified Manta GT/E side skirts, modified boot spoiler, bonnet vents, parts smoothed and remoulded, custom '400' decals to match wheels

INTERIOR

OMP rollcage painted VW Platinum Grey, Sparco racing seats, MOMO Prototipo steering wheel, flocked alloy door cards, alloy door handles, custom flocked alloy rear quarter panel and bulkhead trims, flocked dashboard, Manta GT/E centre console, custom instrument panels, VDO gauges, custom switch panel (battery cut-off switch, spotlight switch, brake bias controller, start button), custom wiring loom, compact de-mister hidden behind dashboard, drilled pedals

THANKS

The guys at Retropower, Luke at WOSP who supplied the starter and alternator, Andy at AJ's Decals, Roger at The Wheel Restorer for the excellent job on the BBS wheels, Phil Ridge for the many Photoshops while deciding on colour choice



Race-style switchgear is very neat



SUPERCHARGED ASCONA



“WE ENSURED THAT EVERY PIECE OF THE KIT WAS A PERFECT FIT, AS IT ENABLED US TO COMBINE PARTS FOR A SMOOTHER FINISH”



It may not be on original hue, but when it looks this good who's complaining!

steering wheel, flocked dash and door card panels, and a variety of gauges and switches designed to help Jason keep in touch with the under-bonnet working conditions of his German gem. Not that getting it to run without fault was as easy as it sounds...

HEATSTROKE

“We had problems with the amount of heat being generated by the supercharger,” sighs Callum. “We had to manufacture a bespoke water-to-air chargecooled inlet manifold that reduces operating temperatures by around sixty degrees. A custom belt pulley was also required in order to maintain the correct operational speed of the Eaton unit, and we used a Turbosmart wastegate to make a supercharger bypass valve that effectively kills off any heat when the car is idling or has closed throttle,” he explains.

With a safe 294bhp registered on a subsequent rolling road session, this extraordinary Opel was ready for Jason to collect in time for this year's VBOA National Rally. “I drove to Retropower from Wrexham before taking the rebuilt car on its maiden voyage to Billing. The reaction from those in attendance at the event was overwhelmingly positive, and that includes a number of 400 purists who I was sure would take exception to my choice of colour!” he smiles. He need not have worried; for many, this awesome Ascona was the car of the show, and with plans for further mechanical updates and plenty of track action on the horizon, its popularity is only going to spiral upwards. Coincidence? We think not! ○

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Tough looking Nova went well down the strip



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PVS

THE PERFORMANCE
VAUXHALL SHOW

SHOW REPORT

PART
2

We take a second look at the awesomeness that was the Performance Vauxhall Show 2015... **WORDS** Dan White **PHOTOS** Dan Sherwood

If there's one thing that we always find tricky, it's picking the photos for a huge show report. There's always so much variety, and so many great shots that we reluctantly have to leave many out. Which is why, even though the show will be little more than a hazy memory for some, we decided to give you a second dose of PVS-based awesomeness.

The number of well turned out cars was as staggering as ever (given a helping hand by a large dose of sun!) and really displayed the

vibrant Vauxhall tuning scene. Everyone who took part should be proud to be part of a thriving scene, and we should celebrate all different forms of modifying within our slice of car culture, even if we may not specifically want to do the same to our cars. There's always much discussion after any large event such as this about the similarity of many cars, yet one quick look over this feature will see there is anything but a lack of originality! While some like to follow there are also many who prefer to lead!



Pair of tidy cabbies make the most of the sunshine

PVS 2015



We've got a lot of time for the original touches on Luke's 'B'

LUKE DILLON CORSA B

Here's a cheeky little number. Luke's neat B is propelled by an XE running twin 45 Webers, Courtenay cams, a ported head, ARP bolts, and a 4-1 manifold. But it's the interior which really caught our eye – check out the bum-numbing Kirkey seats, Safety Devices cage and bare steel Mk1 Escort dash! A cool Corsa and no mistake.



WHEELS

It's undeniably one of the single most important aspects when it comes to personalising your car – wheels make or break a build. For many years the Vauxhall tuning world has become a little entrenched and inward looking, with very few wheels out of the 'chosen few' being accepted. But in more recent times it seems that more and more choices have sneaked in – Here's a selection just to show breadth and depth of options out there.





Adam Chamberlain's Nova was proudly displayed on our stand



Old or new, which would you choose?



Amusing Astra Estate with matching trailer



Another ex-feature car in the shape of this super rare Irmischer kitted creation



PVS 2015



That's something you don't see every day!



Some properly aggressive aero on this Astra



The big drag boys came out to play too



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FAST FACTS

- Mk4 Astravan in Corsa VXR Chilli Orange
- Z20LET engine with hybrid Astra VXR turbo
- Flocked OMP roll cage
- Irmscher Sport Star alloys
- Sparco R333 bucket seats



WORDS Jarkle PHOTOS Matthew Dear

VANTASTIC

It might be that eye-popping shade of Chilli Orange that first draws you to this Mk4 van, but there's a whole lot more to get to grips with under the surface!



FOUR



Nothing, with the possible exception of the Hertz rental car, is faster in real world terms than the humble

Astravan. A combination of car-derived chassis, good range of engines (8v power in a Bedford Astramax was something to crow about twenty odd years ago) and a driver without a personal financial stake in the van itself all combined to make them the undisputed king of the outside lane. The Astravan sadly died with the Astra H, Vauxhall opting instead to push sales of the Corsa Combo and full-sized Vivaro instead, but that still leaves would-be van tuners with plenty of choice – just pick the generation of Astra that most appeals and get stuck in!

Of course while all Astravans were created equal, they didn't all remain so. We've featured a fair few of them over the last few years and the vast majority sported perfect paint and loading bays that hadn't seen a sack of cement or a set of rusty gardening tools for many, many years. The one you see here is

much the same. Owned and built by Adrian Worthy and with thumping Z20LET power up front, it's packed with the kind of details that add up to something very special indeed.

"I've always broken Vauxhalls and moved with what's popular at the time, so I've gone through a fair few Cavalier GSis, Astra SRis and fast Vectras," explains Adrian. "At the moment it's Mk4 Astras and I've always had a soft spot for the van."

IN THE BEGINNING

It helped that Adrian had three vans and a sickly Mk4 GSi sitting in his yard at the time, so doing something with all of them certainly made a lot of sense and cut down the amount of time spent hunting for parts considerably! Of the three vans at his disposal it was actually the oldest that was in the best condition; yes it had tired white paint and a few parking dings, but it was solid where it mattered – the ideal base for a project. Adrian began stripping it down and readying it for a new coat of paint, though at the time he had no idea what the new colour would be.

"Arden Blue was on my list at first, but there are just so many Vauxhalls in

There's something satisfying about using a factory colour on a model it was never intended for





ZLET is the natural choice for a big power swap



Painted 17in Irmischer Sport Stars look the part

“IT WAS ONLY WHEN I SAW A CHILLI ORANGE CORSA VXR AT BILLING THAT MY MIND WAS MADE UP!”



OWNER
ADRIAN WORTHY

AGE 48

OCCUPATION Painter

FIRST VAUXHALL A Chevette – I bought it from my parents.

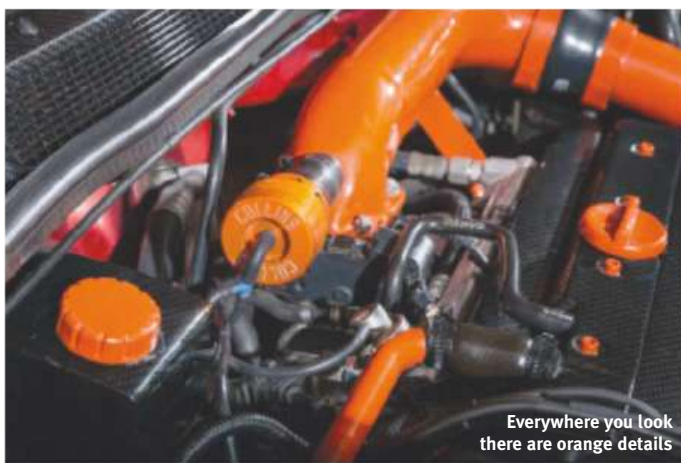
WORST PART OF THE BUILD Getting those seats in!

BEST PART OF THE BUILD Putting it all back together again.

WHAT'S NEXT More power, a forged bottom end and a new turbo of some description.

that colour nowadays,” chuckles Adrian. “It was only when I saw a Chilli Orange Corsa VXR at Billing 2013 that my mind was made up!”

With the van sent off to Martin at Courtney Bodyworks, attention turned to the type of powerplant the re-born van would have. Adrian couldn't help but look to the forlorn looking Mk4 GSi residing in the corner of his workshop at this point, and within hours its Z20LET had been removed from



Everywhere you look there are orange details



“IN THE END I DECIDED THAT 300 OR SO BHP WAS PLENTY IN SOMETHING LIKE THIS”

TECH SPEC

ENGINE

Rebuilt Z20LET with VXR hybrid turbo, injectors, fuel rail, FPR and AFM, CDTi air box, TX Autosport solid boost pipes, silicone hoses and FMIC, Phase 3.5 map, pre-cat removed, 3in Scorpion stainless steel exhaust with 200 cell sports cat, Collins Performance twin piston dump valve, carbon hydrographic dipped air box, rocker cover, injector wiring cover, fuse and relay boxes, brake fluid reservoir cover and strut top covers

POWER

(estimated) 300bhp

TRANSMISSION

F28 gearbox, Astra GSi driveshafts

SUSPENSION

Gaz Gold coilovers all round

BRAKES

Astra GSi discs and calipers all round, uprated pads, braided lines

WHEELS AND TYRES

17in Irmischer Sport Star alloys with Toyo Proxes T1R tyres

INTERIOR

Sparco R333 bucket seats, dashboard, door cards, centre console, sun visors and OMP roll cage all flocked in black or orange, door handles, speaker covers, air vents, kick panels and B-pillars carbon hydrographic dipped, ply lined and carpeted floor, Pioneer DVD player with rear view camera, Alpine V12 amp, Directed 12in subwoofer

EXTERIOR

Mk4 Astravan in Chilli Orange, GSi front bumper and side skirts, OPC rear bumper, de-badged grille, GSi headlights with HID bulbs and Cree sidelight bulbs, carbon dipped front grille, bumper grilles, rear number plate bulb holder, handle and roof trims, tinted windows

THANKS

Martin at Courtney Bodyworks, Nikki at Banbury Flocking, Wicked Coatings, Poole for all the hydrographic work

its moorings and stripped down to its component parts. At this point Adrian was faced with a decision; forge the bottom end and push for mega power, or save some money and build something with a decent, useable bhp figure.

“In the end I decided that 300 or so bhp was plenty in something like this, plus there’s nothing stopping me forging it at a later date. All the VXR stuff went onto the engine at the same time, so it went from 200bhp to 300bhp in one hit.”

Adrian wasted no time in ditching the standard turbo for a hybrid KO4, plus VXR injectors, fuel rail, FPR and airflow meter, solid boost pipes and a TX Autosport intercooler. Factor in the stage 3.5 remap and it swiftly becomes clear how he’s managed to arrive at the magic 300bhp figure, and that really is plenty of power in a front wheel drive van with an open diff.

STRAIGHT SWAP

The engine was finally fitted to the car at the start of last year, a process that Adrian says was both simple and very enjoyable. In fact he goes on to say that rebuilding the van, adding suspension, engine, brakes and everything else, was the most pleasurable aspect of the whole project. This all makes a lot more sense when you take the time to look at the little details that litter every aspect of





this van, and nowhere is this more apparent than in the interior. For starters there's an OMP roll cage, a rare one that was designed specifically for the fourth gen Astra van, plus the lashings of carbon dipping.

DIPPING SOURCE

"I'll admit that I did get a touch carried away with the carbon dipping side of things," laughs Adrian. "A trip to Wicked Coatings in Poole resulted in a £2,500 bill and most of the engine bay carbon hydrographic dipped, plus a fair number of the interior fixtures and fixings."

The attention to detail present in the interior extends further than just the hydrodipping work; check out the roll cage, dashboard, door cards, centre console, and sun visors, all of which now sport either black or orange flock.

"The OE plastics looked out of place once I'd started working on other aspects of the van, and a trip up to Banbury Flocking convinced me that it was the correct route to go down. I ended up having most of the interior done in one three-day period!"

The end result certainly isn't subtle, but it does lend the van a suitably eye-catching interior, something it certainly needed once the exterior panels had been treated to a coat of Chilli Orange. Factor in the GSi bumpers and skirts, lowered stance courtesy of a Gaz coilovers, de-badged panels,



Banbury Flocking did a superb job with the interior

ASTRAVAN

It's hard to imagine the van in its former life as a builder's hack



It's tinted glass and the flawless nature of that paint job, and it suddenly becomes all too clear why Mk4 Astra vans are such a popular base for a Vauxhall project – they have the potential to look truly fantastic.

KEEP IT SIMPLE

Discussing the build story of this van with Adrian paints a deceptively simple picture, particularly when it comes to things like the engine swap. That aspect of the project was actually fairly simple – “I’ve done more than a few conversions in my time,” explains Adrian – but some areas were anything but. Adrian is quick to cite the installation of the natty Sparco R333s as being the most troublesome aspect of the whole tale, specifically the hassle he had when trying to properly anchor them to the van.

“I made sure to get the correct runners for the seats, so fitting them should’ve been a piece of cake! Not only did they not fit properly, they also left me sitting far too high and peeking out from behind the sun-strip.”



Flocked roll cage is an innovative touch

There's no doubting that all that effort, the muttered curse-words and skinned knuckles was worth it though, particularly as this van is now closer to an out and out track car than a haggard load-lugger. Those 17in Irmischer Sport Star alloys are very much the icing on the cake, the perfect balance of subtle style and performance, particularly in that shade of dark grey.

So, what's next? Adrian's quick to point out that 300bhp in a front wheel drive Astravan is more than enough for now, certainly enough to surprise an interesting selection of posh sports cars and over confident BMW drivers. That said, he certainly hasn't ruled out forging the bottom end of that ZLET and fitting some kind of LSD at some point, additions that will enable this belting

looking van to truly realise its full performance potential. We can't wait to see how he gets on, but for now just take the time to take in this once unassuming looking van. It isn't hard to see why the mighty Astravan is such a popular car, and we're fairly sure that many of you reading this are already mourning its replacement in Vauxhall's current model range. 

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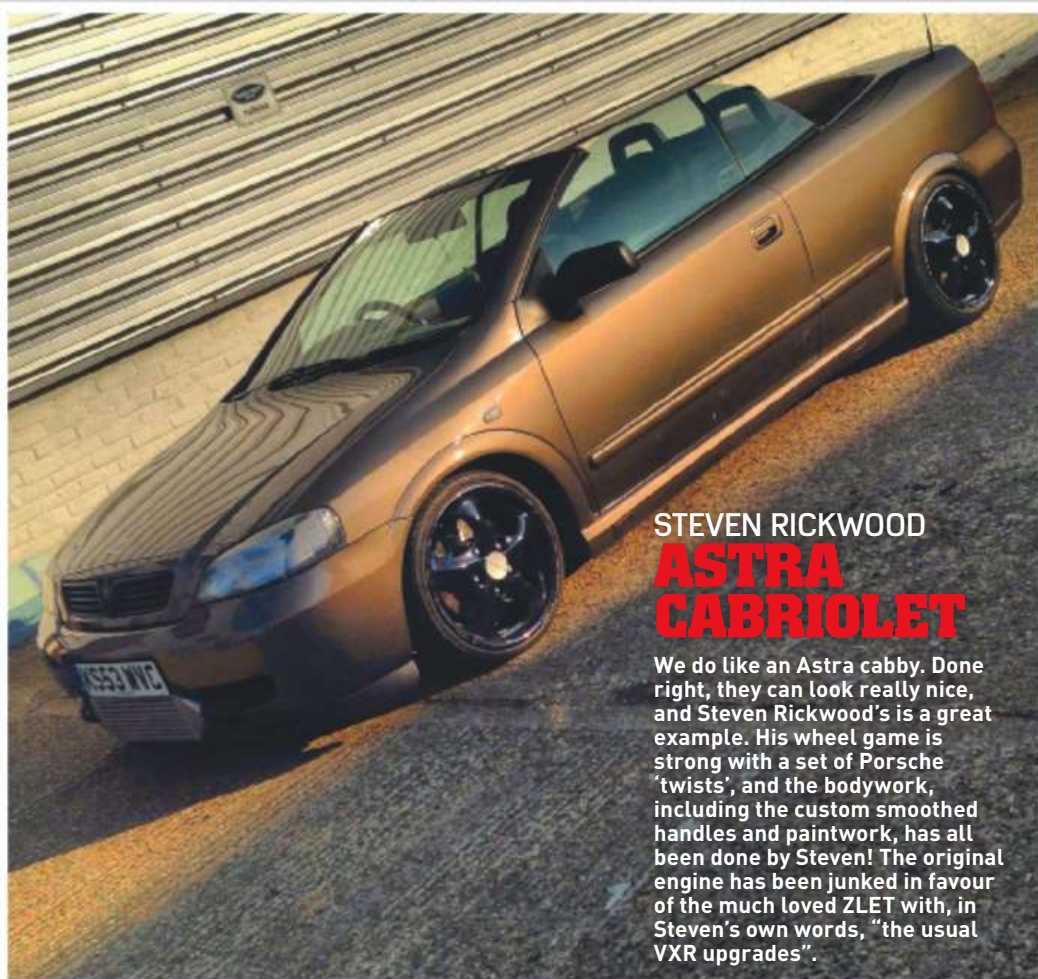
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HALL of FAME

Some top readers' cars to feast your eyes on!



STEVEN RICKWOOD
**ASTRA
CABRIOLET**

We do like an Astra cabby. Done right, they can look really nice, and Steven Rickwood's is a great example. His wheel game is strong with a set of Porsche 'twists', and the bodywork, including the custom smoothed handles and paintwork, has all been done by Steven! The original engine has been junked in favour of the much loved ZLET with, in Steven's own words, "the usual VXR upgrades".



CRAIG GREATHEAD
ASTRA VXR

Craig has owned his tidy VXR since 2010, and it has undergone a lot of changes since then. He's recently decided to carry out a load of hydro-dipping, and has covered loads of parts including external trim, and the wheels! It's a daring effect, and while not to everyone's taste, is certainly different. Power wise Craig believes it's running over 300bhp, with more to come with a Garrett high up on the wish list for next year.





OWEN OBRIEN **ASTRA SALOON**

The humble Astra Saloon is an overlooked member of the Griffin family, having never had a sporty model, and selling in tiny numbers compared to its hatchback sibling. But Owen O'Brien has added his own touches to make his stand out. Bilstein dampers and 60mm lowering springs make it sit nicely over Astra Sport steels, and an Irmischer splitter adds a bit of styling subtlety. Inside you'll find a full GSI interior, and under the bonnet lives the original C14SE livened up with a cam and filter.

IAN WATERFIELD **ZAFIRA VXR**

There's something amusing about a big power Zafira. While they did come in VXR flavour, the majority of other road users simply see them as 'mum chariots' and wouldn't expect them to have over 230bhp. So you can imagine their surprise when they come up against Ian Waterfield's example. With a load of engine work including a custom tubular manifold, Tial exhaust housing and wastegate, and water/methanol injection Ian is hoping to see getting on for 500bhp! Impressive stuff.



HARLEY STEVEN **CORSA 1.4T**

19 year old Harley from Yorkshire is very proud of his "smoothed static Black Edition", particularly the ride height which he claims is lower than you'd get using bag-over-coil air ride. He's also stripped out the interior and slotted in a couple of Suzuka buckets. Despite his young age, and associated insurance woes Harley has managed to squeeze a claimed 170bhp from the 1.4 Turbo.





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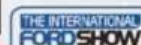


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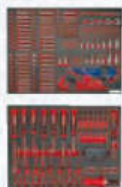
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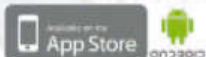
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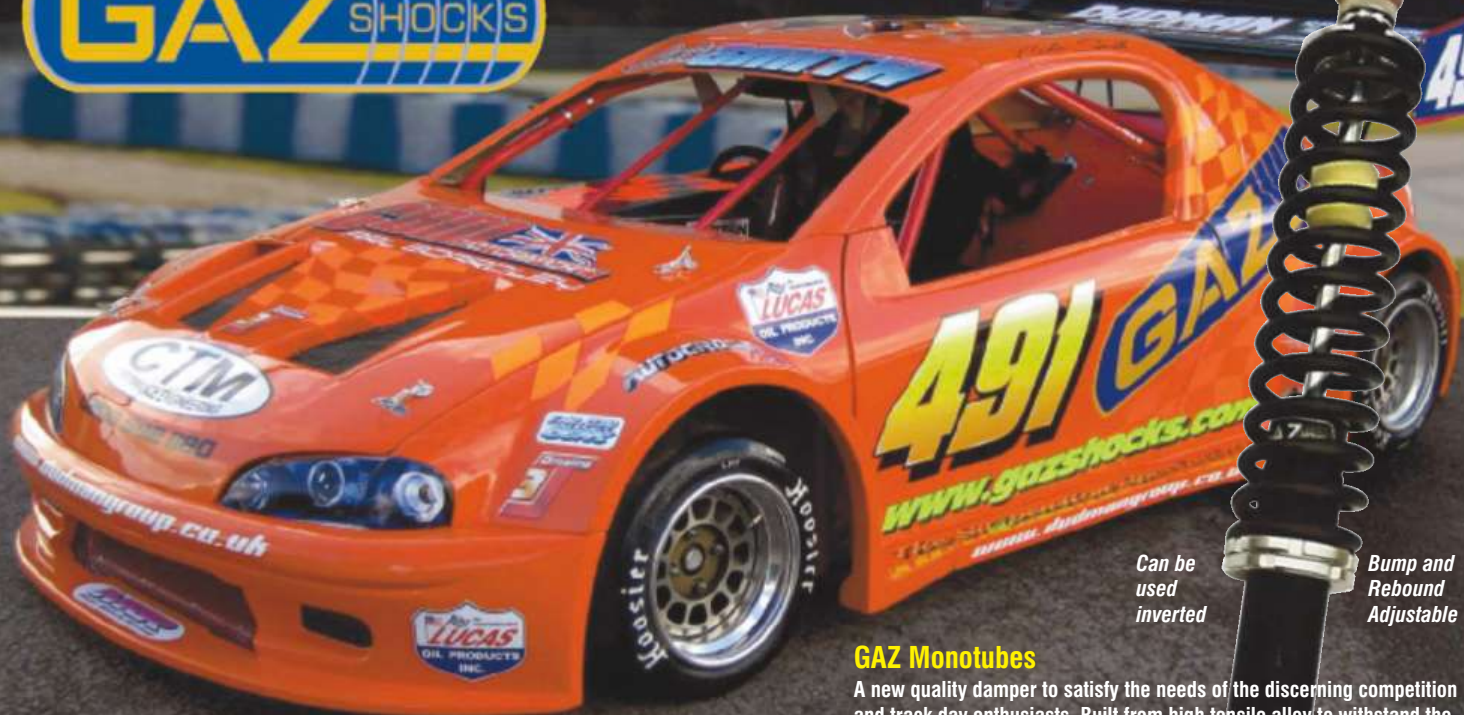
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Gaz GHA height adjustable kits are primarily made for the modified road car market.

FEATURES:-

- On car damping adjustment
- Shortened body and stroke lengths to allow a -25 to -65mm ride height adjustment
- Coarse acme form thread for ease of adjustment
- Zinc plated to minimise corrosion
- Includes high quality coil springs in various rates and diameters.
- Spring rates can be altered on request.
- When a coilover is unable to be installed a separate damper and rear coil spring with a variable spring platform is used so the kit retains full height adjustment all round.

GAZ Gold Coilover Kits

Premium height adjustable kits for tarmac motorsport and the serious track day enthusiast.

FEATURES:-

- On car damping adjustment
- 62mm bodies for increased oil capacity.
- Induction hardened piston rods
- Multi lip sealing.
- Gas cell in the outer reservoir to prevent cavitation and reduce fade in motor racing conditions.
- Lightweight billet alloy bases, end fittings, seats, lockrings, rod guides and gland nuts.
- Nickel coated steel outer tube to provide the best anti corrosive finish possible.
- Anodised outer alloy components

GAZ Gold Pro

Premium range designed for fast road, track day and tarmac motorsport use.

FEATURES:-

- Multi point on-car adjustable control knob to adjust bump and rebound
- Filled with high viscosity index fluid to alleviate cavitation
- Induction hardened piston rods
- Manufactured from high tensile alloy
- Internal gas cell to reduce fade in motor racing conditions.
- Lightweight billet alloy bases, end fittings, seats, lockrings, rod guides and gland nuts.
- Gaz Gold Pro range are offered with self lubricating spherical bearings and progressive bump stops.



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Basildon, Essex, SS13 1EH

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01268 724585

TOP BILLING

We headed along to the annual gathering of Vauxhalls at Billing 2015!

WORDS Jarkle **PHOTOS** Dan Sherwood

Billing lives and dies on the whims of Northamptonshire's weather; a scorching hot weekend almost inevitably leads to a cracking show (and more than a few well cooked Vauxhall nuts), while torrential rain means... well, if you were there in 2012 then you'll already know what it means! This year Billing Aquadrome gave us a bit of everything, with Saturday bringing baking hot sun and Sunday serving up threatening looking clouds and, come 2pm, torrential rain. The

turnout was excellent though and the whole show felt busier than it has done for years, something no doubt helped by the calibre of cars in attendance and the sheer number of milestones and anniversaries that had to be celebrated. The Nova Sport turned 30 this year and there was a mass gathering of cars to mark the occasion, the mighty Lotus Carlton blasted through the quarter of a century mark, and the humble Chevette and Mk1 Cavalier both reached the grand old age of 40, and all these superb milestones were celebrated accordingly.





Custom 2-door Cresta is packing a monster 5.7 litre engine



Oh so retro Victor Estate

VBOA 2015 BILLING

The good old Nova was well represented, with some stonking examples on display



Now that's extreme weight saving!



There's no denying there was a superb variety of cars on show





Victor duo looked superb



Jarkle had to be physically man-handled away from this Manta



JASON JOHNS OPEL ASCONA

The standard of cars was seriously high this year and there were plenty of cars in contention for our 'car of the show,' though it's probably fair to say that this Ascona stood ever so slightly higher than pretty much everything else there on the day. It's been built by the chaps at Retro Power, something that should tell you all you need to know about the standard of the work involved, and was finally screwed together mere days before Billing. Jason Johns is the lucky owner and he was more than happy to talk us through some of the spec highlights, including that screaming, supercharged XE. It isn't that hard to see why we were bowled over by this car – so much so that you can read all about it over on page 40.





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Finesse*
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#theartofdetailing



MARC CORSA A

Novas (and indeed Corsas like this one) weren't exactly in short supply at Billing, but few were as well realised as this. Owned by Marc and looking utterly flawless despite a mammoth trek to Northamptonshire from Germany, this Corsa stood out

because of the number of well thought out and beautifully applied little touches dotted throughout. Of course there is the more obvious exterior stuff that first drew us to the car in the first place; those lovely Exip alloys, SR front 'plough' and fantastic (and

factory applied) coat of Platinum Gold paint, but it's only when you take a peek under the bonnet that you can truly grasp what makes this little car so good. There you'll find a stunning small block, a 13SB to be precise, running twin 40 Webbers, an Irmscher



manifold, and lashings of gold and chrome. It really is a work of art under there, plus it's great to see something other than an XE or a LET getting some much deserved love and attention.



Who doesn't have a soft spot for a wide-arch Chevette?



Ex-feature Corsa B was looking minty fresh

VBOA 2015 BILLING



Mk2 GTE perfection?



Super rare Michalak Corsa Spider made the trip over from Germany





CHARLIE MIDDLETON ASCONA A

Old Opels are a rare sight on British roads thanks to a combination of relatively low volume sales when new, a small (but dedicated) following and, of course, rust. All of this makes Charlie's Ascona A a very rare car indeed, and we counted just two other examples of these pretty little saloons over the course of the weekend. This one was undoubtedly the cleanest though, thanks to a comprehensive restoration carried out entirely by Charlie himself over the course of the last two years, with no expense having been spared along the way. The end result isn't a particularly fast car (though that carb-fed 1600 can hustle the lightweight Opel along at an impressive rate of knots when required), but it is a stunning one; Monza Blue paintwork, arrow straight panels (some of which had to be sourced from Germany), and tasty ATS alloys tucked under each arch. Proof that less really is more when it comes to old Opels.

Charlie's Ascona is the result of a painstaking restoration



How many of you recognised this as a Bitter CD – built on a shortened Opel Diplomat floorplan?



VXR8 in Jungle Green looks properly menacing!



IAN PASKIN ASTRA MK4

Billing has its roots in older GM machines from the '50s, '60s and '70s so of course models from that period make up a large part of the show, and though we're massive fans of all things retro with a Griffin badge, it's also nice to see something a little more modern getting some love and attention. That's why we were so pleased when we clocked this cool little Mk4 Astra. Keen eyed readers may have already noticed that all is not as it seems, and that there are a number of components on this car that certainly didn't start out life attached to a Vauxhall! A quick chat with Ian Paskin, the car's builder and owner reveals that, thanks to the running gear from an unfortunate Impreza, this is now a four wheel drive Astra. That means that pretty much everything other than the shell itself originated in the land of the rising sun, including that famously punchy 'boxer' engine (sorry), transmission, hubs, brakes and suspension. It's a car that's taken shape over the last three and a half years and still has a long way to go, with Ian admitting that he plans to raise power far and above the current figure of 250bhp or so, something that should make this innocuous looking car an even more formidable prospect when out on track.



Dave Boon's original
'Silver Aero' concept car



WAY MORE STYLED



Take your Vauxhall's style up a notch or three with oh-so-sweet accessories from Irmischer. For over 40 years they've been partnering with Vauxhall to make perfect styling kits, grilles, exhausts and lower skirt packages.

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VAUXHALL

NOVA SPORT ANNIVERSARY

WORDS Jarkle & Dan White PHOTOS Dan Sherwood

30 YEARS OF THE NOVA SPORT

A very special car deserves a very special celebration to mark three decades of existence. Billing was the venue for this extraordinary gathering.

There were plenty of milestones to pick from at Billing this year, but it's probably fair to say that the guys over at the Nova Sport Register went further than most in their attempt to celebrate the Sport's thirtieth birthday. A whopping 27 Sports (out of an original run of 502) were assembled on Sunday afternoon, a sight made all the better by the inclusion of Colin McRae's iconic rally version and the Nova Spider that shared the Vauxhall stand with the Sport when both were launched at the NEC. Sports of every conceivable condition had made the pilgrimage, everything from jaw-droppingly spotless cars, to slightly tired looking

shells awaiting comprehensive restoration. Accompanying this historic meeting (we're almost certain it marked the largest gathering of Sports ever, as they were sent out to individual dealers when new) was an underlying atmosphere of friendly bonhomie, a shared sense of achievement and recognition – and rightly so! It was only fitting that the Nova Sport Register were awarded the gong for Best Stand and that Sean Kell took home the coveted Chairman's Cup in his truly spotless Sport.





While many were original, others sported tasteful mods



What's the collective noun for a gathering of Nova Sports? A Homologation?

A BRIEF HISTORY OF THE SPORT

Born out of a desire to make the Nova more competitive in the 'up to 1300cc class' Vauxhall teamed up with GM Dealer Sport and, following homologation rules, produced 502 Nova Sports.

The 135B engine from the 1.3SR was used, but with the addition of a twin 40mm Weber carb, Irmscher inlet manifold, Irmscher airbox, Ashley backbox, and optional Irmscher/ENEM cam, power went from 75bhp to an impressive 93bhp (87bhp without cam). It went on to be very successful, and took the fight to its rivals from Skoda and Talbot. The road cars were, and still are, impressive performers, and are now very sought after.

For more on this cool little car check out www.novasportregister.com – it's packed with definitive information and their mission is to keep a record of every known Sport to keep the history of the car alive for generations to come.



NOVA SPORT ANNIVERSARY



IAIN TALBOT NOVA SPORT

The Nova Sport Register managed to assemble 27 Sports for the model's 30th birthday, so it goes without saying that there were plenty of stunning cars to choose from on the day, though Iain's car stood out from all the others thanks to its blend of OE and aftermarket hardware. The vast majority of Sports are now kept exactly as Vauxhall intended them to be, and in some ways this is a good thing – it's not exactly like there were that many to begin with! That said, it was nice to look round an example that had had some aftermarket tweaks added (though Iain was at pains to point out that everything is easily

reversible), especially as everything had been carefully chosen to work with the Sport's motorsport infused character. Those Wilwood four-pot front calipers are actually from another Nova, though it was one that'd met a fiery demise, and Iain managed to get them for a fiver each – the bargain of the century?! We're massive fans of some of the little details that litter the car like that one-off CNC machined exhaust manifold, the flawlessly prepared and presented engine bay and those Compomotive alloys. Basically this is a masterclass in how to modify a Sport without ruining it!



Proof that you can modify a Sport and still retain its originality and style



A justifiably proud bunch of Sport owners





Bringing along a work in progress
Sport is proper dedication



Not all the Sports were still in
possession of their original power plants!

MCRAE NOVA

Strictly speaking this isn't Colin McRae's Nova, but it is a very faithful replica of the car that took him to his first WRC event way back in 1987 in Sweden. He finished 36th overall, and a very creditable third in class. This original car was campaigned in anger for some time (being piloted by Harry Hockley before McRae), and went through several hands before ending up in a very sorry state, and being broken for spares. Around a decade ago the McRae family decided to gather together a collection of their most significant rally cars – which included finding a Sport in good condition to 'recreate' the original car. The Nova they settled on (after much searching and hunting for the correct spec) was rebuilt by Barrie Lochhead into an almost perfect replica of Colin's original example, down to the decals and 'A681 DNT' numberplate.

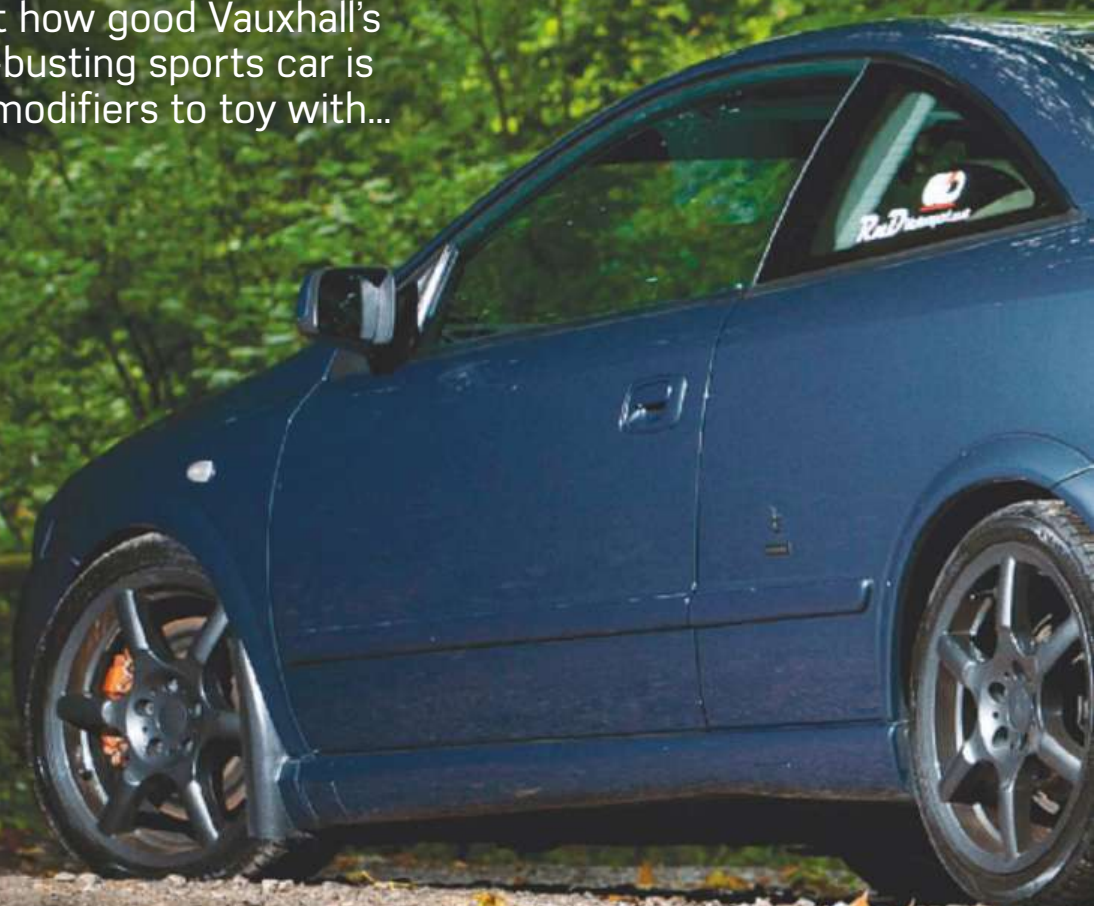


ASTRA COUPE

CHEAP TRICKS

Stuart Lovell's 440bhp Mk4 Astra Coupe demonstrates just how good Vauxhall's two-door bargain-busting sports car is as a platform for modifiers to toy with...

WORDS Dan Furr **PHOTOS** Rob Fisher



FAST FACTS

- ★ 440bhp forged Z20LET
- ★ Owen Developments hybrid turbo
- ★ Bilstein B14 coilovers
- ★ Modified GSi front bumper
- ★ VXR front brakes



ASTRA COUPE

ZzoLET has been at the receiving end of some serious engine work



Discs are next on Stuart's shopping list!



So many trim and engine options. So much fun to be had for remarkably little money. Yup, we're talking about the Mk4 Astra Coupe – arguably one of the finest Griffins of recent years, and a car that continues to enjoy popularity among petrolheads over a decade after it disappeared from dealer showrooms.

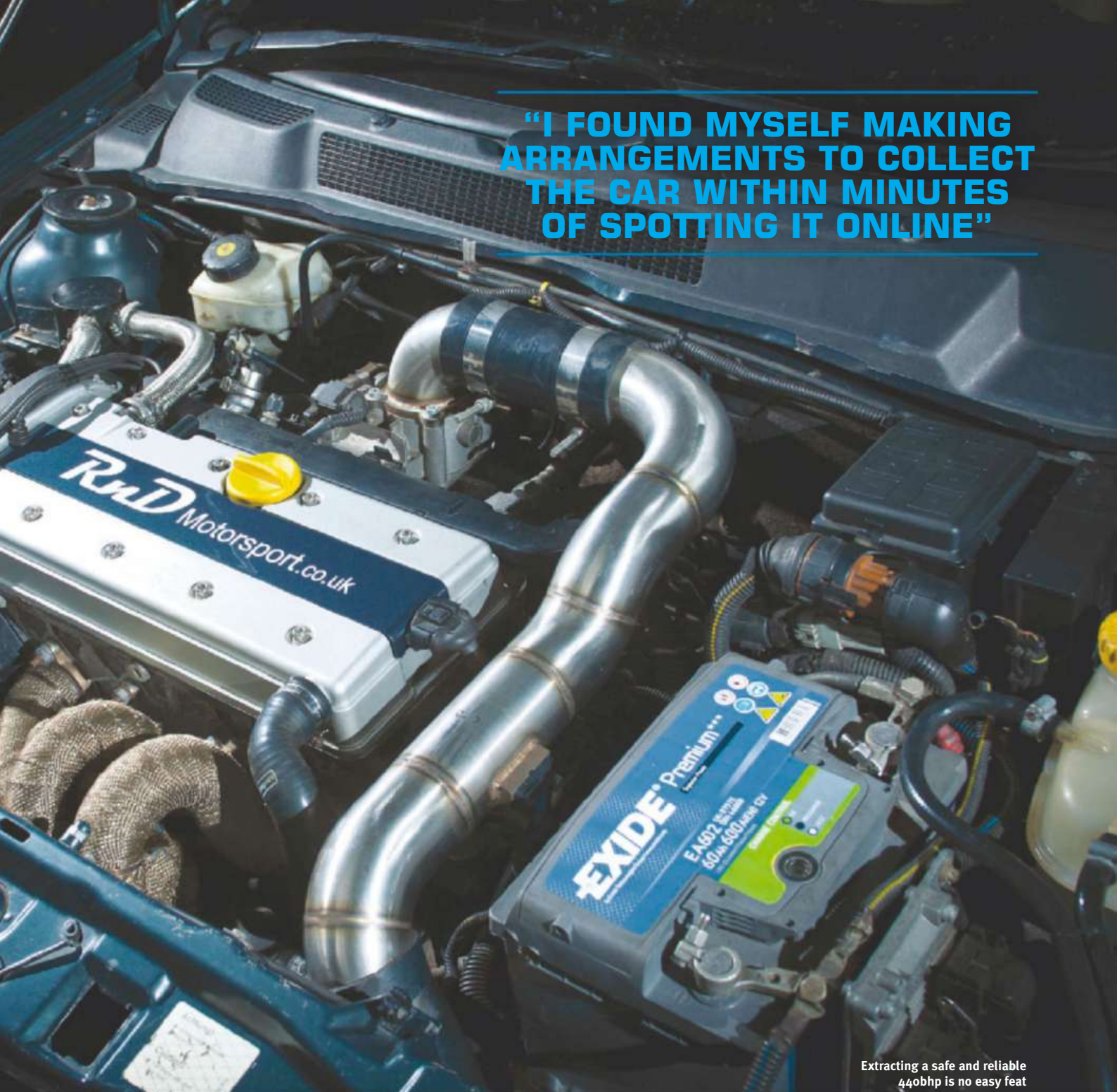
Assembled by defunct Italian styling house, Bertone, the Mk4 Coupe offered itself up in the guise of a huge number of special editions during its factory production run. The success of the model in competitive motorsport generated further variants, thus affording owners of this sleek road-going two-door the freedom to 'mix and match' parts from across the range,

enabling personalisation with little effort.

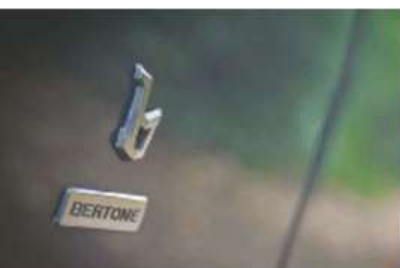
Forced induction was also an option thanks to the use of the near-200bhp ZzoLET powerplant found beneath the bonnet of the model's GSi-badged hot hatch sibling. "My cousin owned a turbocharged Mk4 Astra Coupe kitted out with cool red leather seats," recalls Datchet resident, Stuart Lovell. "He took me out for a spin in the car. I was bowled over by its performance, its looks and its handling abilities, and I promised myself that I'd buy an example to call my own as soon as funds and insurance premiums allowed," he says.

Fast-forward to late 2012, and Stuart followed up on his plan of action by purchasing an '01-plate Ural Mountain Green Astra Coupe equipped with a Milltek exhaust system, a GSi front

"I FOUND MYSELF MAKING ARRANGEMENTS TO COLLECT THE CAR WITHIN MINUTES OF SPOTTING IT ONLINE"



Extracting a safe and reliable 440bhp is no easy feat



bumper and Zafira GSi snowflakes. "I'd been monitoring Mk4 prices on eBay, bidding my time and saving my cash for the right car," he continues. "Almost every other Astra that I came across was dressed in Europa Blue, but the lure of the rare green paintwork seen on the coupe that I would go on to buy was too difficult to ignore. Ultimately, I found myself making arrangements to collect the car within minutes of spotting it online!" he chuckles.

BREAK IT DOWN

A fault-free 2000 miles of motoring followed the purchase of Stuart's awesome Astra. Unfortunately, the first of many mechanical failures materialised thereafter. "I'd spent a long time preparing the car for action before putting it to use as my daily driver," he explains. "Work included the

application of a new oil return for the stock Ko4 turbocharger, but I guess that my lead foot must have contributed to the unit's untimely demise," he admits, before telling us that the incident gave him all the excuse that he needed to replace the faulty turbo with one lifted out of an Astra VXR.

A Milltek pre-cat decat pipe and sports cat soon joined the car's existing exit pipework, and a Stage 2 map pushed performance well past quoted factory figures. The lean green Vauxhall machine's Z20LET seemed only too happy to be on the receiving end of these power upgrades, but disaster struck when engine failure occurred as a consequence of a damaged piston ringland (the portion of a piston that supports the ring itself).

Lost compression and scored



OWNER STUART LOVELL

AGE 25

JOB Office maintenance engineer

FAVOURITE VAUXHALL

Lotus Carlton

BEST THING ABOUT THE CAR

The colour

WHAT'S NEXT? A new gearbox and a Quaife ATB differential

ASTRA COUPE

bores rendered the once-poky lump as scrap. All was not lost, however, as Stuart sourced a replacement tall engine and swapped surviving parts from the dead Z20LET onto its successor. "I took the opportunity to add more tuning gear in the form of a Mishimoto M-Line front-mounted intercooler, an 80mm throttle body, VXR fuel injectors, and a Z22SE airbox with a dedicated cold air feed," he tells us. "I spoke to Dan Robson and Mark Reilly at York-based Vauxhall tuning specialist, RnD Motorsport, before handing the reassembled car over to them for the addition of a Stage 3.5 map complete with anti-lag. I knew that the resulting 290bhp would be teetering on the edge of what the engine's stock internals could cope with, but I was confident in the car's abilities and looked forward to seeing what it could do," he smiles.

DÉJÀ VU

Sure enough, the cool coupe took to the tarmac like a dream. In fact, 20k miles of spirited road use passed before disaster reared its head once again. "The car suffered another engine failure!" gasps Stuart. "Aggressive heat cycles and hard use had resulted in the exact same complaint that had caused the premature death of the earlier Z20LET!" he adds.

The affected parts were sent to RnD Motorsport for inspection. It was clear that the driving style that the car was being subjected to – coupled with Stuart's desire to squeeze every last ounce of performance out of his Astra's nuts and bolts – was likely to result in another catastrophic mechanical failure if a like-for-like engine was supplied in place of the lifeless powerplant. With that in mind, Dan and Mark highlighted the potential for prolonged reliability with the possibility of big power if Stuart would agree to their suggestion of dropping a fully forged Z20LET into the engine bay.



TECH SPEC

ENGINE

Z20LET 1998cc DOHC turbo, modified Wössner 86.5mm forged pistons, PEC I-beam con rods, ACL race bearings, ported and polished cylinder head, Piper valve springs, X2oXEV inlet camshaft, RnD Motorsport adjustable pulleys, NGK Iridium spark plugs, ASNU 1050cc fuel injectors and 340lph in-tank fuel pump, custom MAFless map on factory ECU, 3-bar map sensor, AEM Dryflow cone air filter, refluanged Nissan 200SX inlet manifold, Owen Developments GT2871HTA hybrid turbocharger, RnD Motorsport custom turbo air feed pipe, Mishimoto M-Line front-mounted intercooler, Forge Motorsport large recirculation valve, RnD Motorsport custom stainless tophat and boost pipes, RnD Motorsport 3in stainless steel exhaust system, all new sensors, nuts, bolts, engine covers and pumps

POWER

440bhp (estimated)

TRANSMISSION

Front-wheel drive, Getrag F23 five-speed manual gearbox, Helix six-paddle clutch, Courtenay Sport lightened flywheel, Powerflex 'Black Series' mount

SUSPENSION

Bilstein B14 coilovers, Astra H TwinTop front anti-roll bar, Whiteline adjustable rear anti-roll bar, RnD Motorsport solid subframe bushes, RnD Motorsport spherical bearing wishbones and rear beam

BRAKES

Astra H VXR front calipers and discs, factory rears, EBC Yellowstuff pads, HEL braided hoses

WHEELS & TYRES

7.5x17in Vectra B GSi Phase 2 alloy wheels painted Lotus Carbon Grey, Uniroyal Rainsport 3 tyres

BODY

2001 Astra G Coupe Turbo, Ural Mountain Green paintwork, smoothed and flushed GSi front bumper with meshed opening, Irmischer front grille with stainless insert, rear wing, Hella quad headlight and indicator units, clear side repeaters, hydraulic bonnet lifters, electric sunroof, reverse parking sensors

INTERIOR

Factory cream leather upholstery and heated seats, Irmischer door pins and pedals, centre console painted Ford Champagne Gold, Irmischer gear knob, twin pillar-pod gauge holder housing boost and air/fuel ratio gauges, white LED dash and interior light conversion, dash-mounted boost switch, Pioneer head unit, Alpine E door speakers

THANKS

Dan and Mark at RnD Motorsport, Scott McGough, Steven Rickwood for help with the bumper and wheels, my other friends for the help and advice that they have offered me during the build, and to my parents for their ongoing support.

Look really carefully and you can just about see an Astra hiding in the bushes



"We decided upon a specification that would result in an engine capable of chucking out close to 500bhp," says the 25-year-old office maintenance engineer. "Running the car at a much lower top end figure provides headroom that ensures safe operation under load, although 440bhp is still pretty impressive!" he laughs. We're inclined to agree, and it's clear that the use of Wössner oversized forged pistons, PEC rods and ACL bearings beneath a ported and polished cylinder head packing Piper valve springs, an X2oXEV inlet camshaft and adjustable pulleys have gone some way towards delivering peace of mind whenever the car is being used in anger.

FORGING ON

ASNU 1050cc injectors, a high-flow fuel pump and a custom map on the car's stock ECU also join the party, while airflow improvements can be detected by the use of an AEM cone air filter, a refluanged Nissan 200SX



Cream leather shouldn't work... but it does

**“WE DECIDED UPON A SPEC THAT
WOULD RESULT IN AN ENGINE
CAPABLE OF CHUCKING OUT
CLOSE TO 500BHP”**



ASTRA COUPE

Deceptively simple styling
hides a big power bruiser



exhaust manifold, an Owen Developments GT2871HTA hybrid turbo and a turbo-back RnD 3in stainless steel exhaust system with a 4in outwardly rolled tip.

The car's handling abilities are managed by Bilstein B14 coilovers accompanied by uprated anti-roll bars and solid subframe bushes. Further chassis upgrades are seen through the spokes of Vectra B GSi Phase 2 alloy wheels painted in a Lotus shade known as 'Carbon Grey'; Astra VXR front anchors stuffed full of EBC Yellowstuff joy, performance discs and HEL hoses bring this green-eyed monster to a sudden halt whenever Stuart taps his

foot on the brake pedal, although he is intending to improve upon this already-effective stopping power by investing in AP Racing four-piston calipers in the not-too-distant future.

SMOOTHLY DOES IT

His Astra's exterior remains largely unaltered – testament to the excellent job that Bertone did when drawing out the model's clean lines and simple details. "A friend and I worked together in producing a smoothed and flushed GSi bumper with a meshed opening designed to increase the amount of air hitting the Mishimoto intercooler. Hella quad lights also sit up-front,

sandwiching themselves around an Irmscher grille," confirms Stuart.

Similar subtle styling updates populate the car's cabin, with a smattering of goodies lifted from the Irmscher parts catalogue sitting alongside a centre console covered in a lick of Ford Champagne Gold. The latter is a nice touch that works well with the factory cream leather seats and door cards, but once again, it's the mechanical aspects of this neat Vauxhall that concern Stuart when we ask him what the future holds. "I've just killed the car's transmission!" he groans, referencing the smashed fourth and fifth gears that have forced

him to nurse the car since its *Performance Vauxhall* feature photo shoot. "Don't worry, I've bought a low-mileage replacement gearbox equipped with a Quaife ATB limited-slip differential!" he assures us, acknowledging the opportunity for improvement that broken parts continually provide him with.

And therein lies the beauty of the Mk4 Astra Coupe; a super sports car that is a joy to drive, available to buy at a knockdown price and open to the application of a massive range of tuning parts makes this a no-brainer for those looking for four-wheeled fun on a budget. What are you waiting for?! 🏁





The Original Groovers

Stunt driver and Tarox founder Gianni Taroni set about revolutionising the braking game as far back as the mid 70s. After developing F1 world championship winning brakes for Keke Rosberg, attentions turned to the road car market. In 83 Tarox manufactured the world's first ever grooved brake disc, which has since been developed into the range of styles that we offer today.

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■ ASK THE EXPERTS

BRAKES

YOUR QUESTIONS ANSWERED

This month we ask Dan Newton, boss of PB Brakes, your questions about brakes. **WORDS** Midge

Why do performance brake discs have grooves and holes in them?

There are a couple of reasons for having drilled holes or slots (or both) in your discs. The friction created between the pads and disc produces a lot of heat, which can lead to brake fade. The holes and grooves help both the heat and the resultant gases to escape. They also help to channel water and other unwanted material away from the contact surface to maintain maximum friction.

The discs are actually cast plain, then once they have been milled down to a smooth surface the pattern is engraved onto them by CNC machine. The pattern on most brake discs flows in the same direction as the internal veins, which reduces the strength of the discs. Ours flow in the opposite

direction as we found this doesn't decrease the strength as much without affecting the function.

Why do people fit braided hoses? What do they do?

Braided hoses comprise of a Teflon inner wall, with strands of stainless steel braided on the outside for increased durability. One advantage is that they expand less than your OEM rubber hoses, which allows you a firmer brake pedal. A firmer brake pedal means more feedback and ultimately better braking. The other big advantage is safety – They're almost bulletproof! Useful if you have problems with people sabotaging your brake lines as you sleep.

Why is it important to change your brake fluid regularly?

Glycol-based brake fluid is hygroscopic which means that it loves to absorb moisture, which is always going to find a way into the brake system via micro pores in the cap, lines and seals. This is a bad thing since it dramatically reduces the boiling temperature of the

brake fluid – 3 percent water in DOT4 fluid can reduce the boiling point by up to 50 percent! That's dangerous because bubbles are compressible, which causes at best a spongy pedal feel, and in extreme cases it may go all the way to the floor without actually stopping the car!

Why are bigger discs better than smaller discs?

One word – Torque! When you increase the diameter of the disc, the amount of braking torque also exponentially increases. So in theory the bigger the disc, the faster you'll stop. However, there is a limit to how big you can go. You're limited by how much grip your tyres allow, once your discs are over a certain size you'll brake so hard that the ABS will initiate in order to prevent the tyres from losing traction, and whatever gains you made are out the window. Brake pads can also be a limiting factor as your bog-standard street compound will just melt if subjected to more torque than it can handle. You also need to consider that brake discs are fairly heavy items, and increasing the weight that each wheel

needs to rotate is going to have an effect on your acceleration. This maximum recommend size of discs depends on the car, but generally speaking, heavier cars require larger discs for effective braking, and lighter cars can get away with running smaller discs.

Why are some discs/rotors one-piece and others two-piece?

It all comes down to cost really. Your bog-standard OEM discs are usually cast in one solid piece as this is most cost effective way to manufacture them. One-piece discs are fine for normal use and the odd spirited drive, but push them too hard or take them on the track and they will fade within a couple of laps at race speed. When you're flying down the straight at 130mph and you hit the brake pedal, the last thing you want is for it to sink right down to the floor because of fade. One solution is to upgrade to a set of two-piece discs with billet aluminium centre caps. The contact area between the actual disc and centre cap is minimal, which greatly





improves heat dissipation by allowing the heat to escape, whereas one-piece discs tend to retain it. Another advantage of having centre caps is aluminium dissipates heat more effectively than steel, and it's a lot lighter too. The next step up would be 2-piece floating rotors. The centre caps on these bad boys have even less contact area with the disc, allowing ridiculously efficient cooling! A little bit of an overkill for most street cars, but worth every penny for a full-blown race car.

Why are ceramic brakes silly money?

Ceramic brake discs are made from a compound of carbon and ceramic. The manufacturing process is complicated and lengthy, with one disc taking around a month to produce. That accounts for some of the cost, and the rest? Well, ceramic brakes are usually sold as add-ons for supercars so they're bound to be over-priced!

What does the DOT mean in brake fluid and what should I look for?

DOT is a system created by the Department Of Transport in the US to grade brake fluids based on their boiling points. DOT4 is the one you want to go for as it's minimum boiling point is 230°C, more than enough for street applications. DOT5 has a higher boiling point, but it's silicone based, which isn't suitable for most braking systems.

What are brake pads actually made of?

Brake pads can be made from a variety of different materials. Your standard



street compound pads are usually a non-metallic composite of various synthetic materials. They offer great cold bite and very low noise, but the drawbacks are they lack friction and will start to fade at relatively low temperatures. At the other end of the scale you have race compounds, which are either fully metallic or ceramic in composition. They offer much higher levels of friction and are a lot less susceptible to fade, but usually need warming up to optimal temperature in order to work properly. The cold bite is poor, they munch down your discs like there's no tomorrow, can be quite noisy, and you'll be lucky to get 1000 miles out of them. Great on the track, awful on the street. A good middle-ground option is a sport compound pad. Made from semi-metallic materials, the cold bite is good, and the warm bite is even better. You may or may not get a little noise depending on the application, but it's a small price to pay for big gains in friction and reduced fade.

My BMW has an ebrake, can I still have a big brake conversion?

Up until recently, you couldn't upgrade the rear brakes on a car with an electronic handbrake without losing that function, which wouldn't be street legal. However, we have spent the last couple of years developing a new electronic line lock system that will retain the OEM handbrake on these cars, and it's finally ready! So far we have adapted the system to work with a few Audi models and the new BMW 5-Series F10, but we are working to increase the available applications all the time. You can order it from our website as part of a rear brake kit.

Why do all cars have bigger brakes on the front than on the back even when they're rear wheel drive?

It's a simple question of physics. When you brake heavily the weight transfers to the front, requiring much more stopping power than the rear. This is why the brake bias on most

road cars is around about 70-percent front and 30-percent rear.

Can you get uprated drum brakes?

You can, but it's much more advisable to opt for a disc conversion kit instead. Drums are inherently flawed as their design traps both heat and dust. If you've ever removed a drum that's been on for a while you'll know just how much dust they can create.



Why are fixed calipers better than floating calipers?

Most cars as standard come with floating/slider calipers that have one, or if you're lucky, two pistons in the inner side of the caliper only. So when the hydraulic pressure from the master cylinder forces the piston(s) against the pad, the whole caliper is pulled inward as the pads clamp down on the disc, hence the name 'floating'. One downside of this is the pads on the outer side of the caliper can wear unevenly and you can end up with something that resembles a door wedge. Another is that since the piston(s) needs to travel so much, the brake pedal can feel spongy and unresponsive. They can also become a bit sticky as they age. On the other hand you have fixed calipers with multiple pistons on either side. Since the pistons are clamping from both sides, the caliper doesn't move and remains 'fixed' in place. This allows for much more even pad wear and a firmer, more responsive pedal feel. But the benefits don't end there. Our PB fixed calipers are all forged from aerospace-grade 6061 T6 aluminum which makes them a hell of a lot harder, stiffer and lighter than their cast-iron counterparts. The monster 8-pot calipers that we include with our 405mm kit take toughness to next level with their monoblock design.

What's the biggest brakes I can fit on my car?

Well, the only real physical obstruction is the size of your wheel, but there is a

sensible size limit for every vehicle.

Remember that episode of *Top Gear* where they spent 3 grand upgrading the brakes on a Renault Avantage, only to find it actually made the car's lap times slower? That's because they went too big and the car didn't have enough power to handle the added weight and increased wheel diameter. Had they gone for a smaller kit and retained the same wheel size the lap times would definitely have shown improvement.

What is bleeding brakes and why does it have to be done?

Over time air will find its way into the brake system, so it needs to be released every couple of years. The problem with having air in the system is, unlike brake fluid, it's compressible. This cause your pedal to become spongy, and if too serious can lead to complete brake failure, so it's really important to bleed the brake lines before it gets to that stage.

I've been told I need a spot caliper for a rear conversion. What's that?

Handbrakes on many vehicles still use brake shoes and drums that are integrated into the rear discs. Upgrading the rear brakes with this system is fairly straight forward as most conversions also have integrated drums fixed to their rear discs. However, recently more and more cars are moving toward systems where rear OEM calipers double-up as handbrakes. One solution is a spot caliper, which is basically a small single-piston caliper that connects directly to your handbrake cable, and must be used in conjunction with your main rear caliper. There are drawbacks; namely they usually don't come with any form of installation hardware, so you have to make a set of custom mounting brackets yourself. They're also pretty expensive. it wouldn't be unreasonable to expect to pay around £300 for parts and labour. Then once it's installed you now have 6 calipers to buy replacement pads for, rather than 4. Fortunately PB Brakes have a much more convenient and cost effective solution in the form of our patented line-lock system. This allows our rear calipers to act as handbrakes much like the OEM parts. The line lock modules come already attached to our caliper mounting brackets, so they are a direct bolt on and require no modification. And the best part, they are a fraction of the cost at £100 a set!

FOR MORE INFO GO TO:
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ESSENTIAL TOOLS

Spanners/sockets:

Metric - 10, 13, 15, 17, 25 mm

Allen keys - 5, 6 mm

Torx - E10, E20

Torque wrench - 20-50 Nm

Various screwdrivers
and a scraper

Multi-purpose grease

C20LET CAM BELT AND CAM UPGRADE

Here's how to renew the timing belt, tensioner and idlers on the C20LET and fit an XE inlet cam with a Vernier pulley. **WORDS AND PHOTOS** Rob Hawkins

The turbocharged 2-litre C20LET is a relatively straightforward engine with a twin cam head and a single timing belt wrapped around two idler pulleys and one tensioner. While it was originally fitted to the Cavalier and Calibra Turbo, it's now a common sight under the bonnet of many a modified Nova, Corsa, Tigra and Astra thanks to its factory 204 bhp at 5600 rpm and the availability of numerous tuning options.

Whether you're new or well-attuned to the C20LET, it's worth knowing what's involved in maintaining this popular motor, so we've teamed up with M J Motors to show how to renew the timing belt, idlers, tensioner and

water pump. This should be done every 40,000 miles and typically takes half a day to complete, depending on how much space you have in the engine bay. For the sake of photos and to avoid lots of shots of fingers and thumbs, we removed the engine from a Calibra Turbo to make it easier to outline the work involved.

Typical problems associated with renewing the timing belt on the C20LET start with the timing belt cover. This plastic cover is secured with three 10mm bolts, which sit in 1mm studs in the front of the engine. These studs can shear off and the solution when this happens is drill them out, which can be tricky. Leaving the timing belt cover off is the easy way around this, but you don't want road dirt and

debris wrapped around your timing belt.

When changing the timing belt, it's worthwhile renewing the water pump if you're unsure how old it is. This is sometimes stuck in the engine block and will need some persuasion with a long screwdriver to help release it.

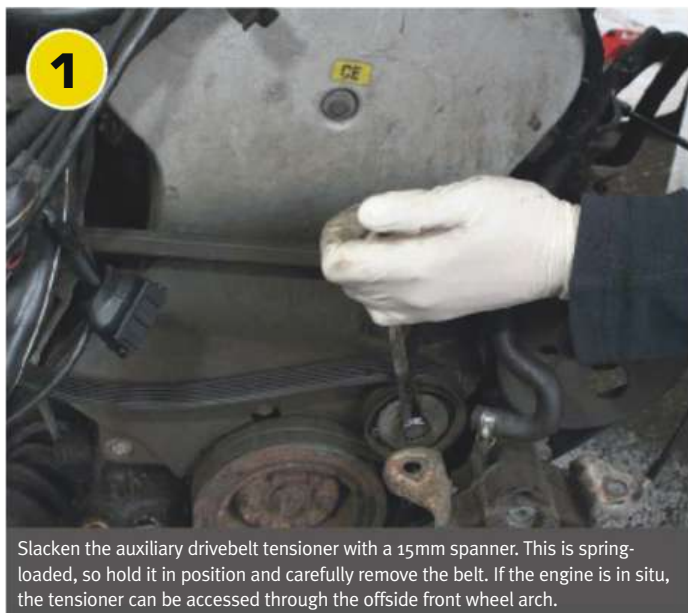
We've not only shown how to renew the timing belt, idlers, tensioner and water pump, but we've also provided step-by-step instructions on one of the popular C20LET mods – namely fitting the XE inlet cam with a Vernier pulley. The XE inlet cam has a higher lift over the standard C20LET inlet cam, but has to be accurately timed using a Vernier pulley. A standard pulley will fit, but the timing will be wrong.

Many people chose to fit a second-

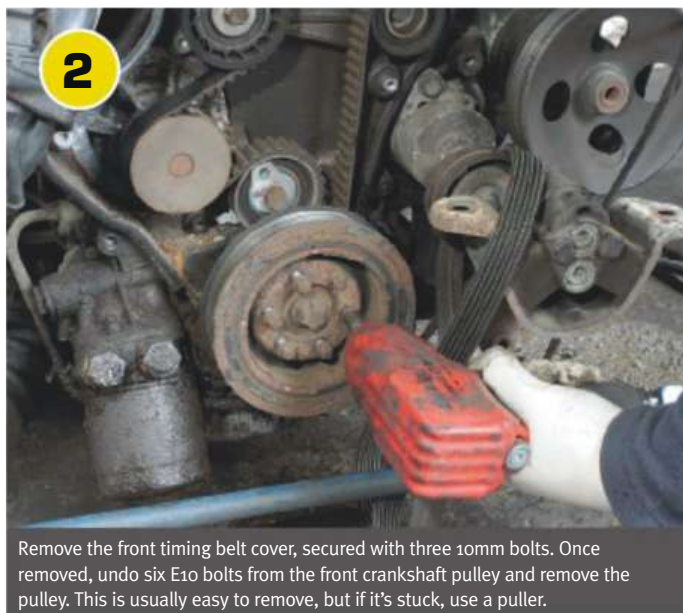
hand XE inlet cam, but this can sometimes defeat the point of the modification, unless you're sure it's in good condition. A visual inspection of a second-hand cam will hopefully spot any cracks or excessive wear, but there has to be a significant saving over brand new parts for a second-hand part to make sense. SBD Motorsport for instance, sell a brand-new XE inlet cam made by Kent Cams for £288 (including VAT) and a pair of Kent Vernier pulleys for £229.

The following 20 steps show what's involved in renewing the timing belt, idlers, tensioner and water pump on the C20LET and swapping the standard inlet cam and pulley for an XE cam and Vernier pulley.

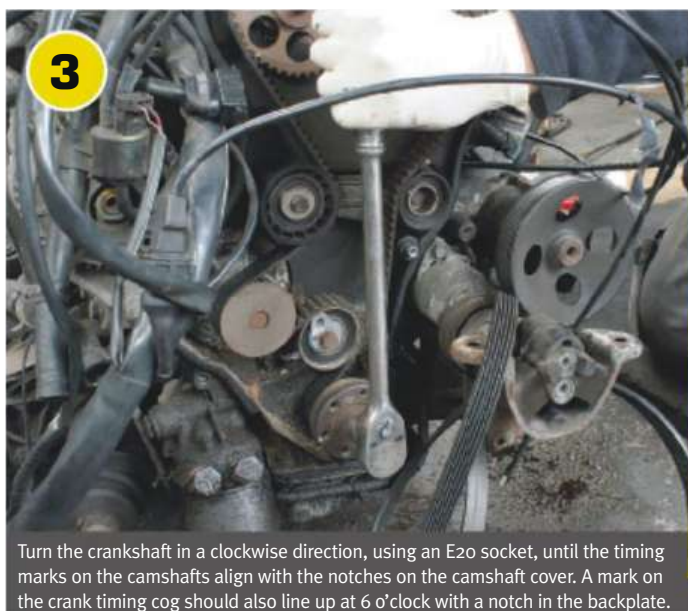
C20LET CAM UPGRADE



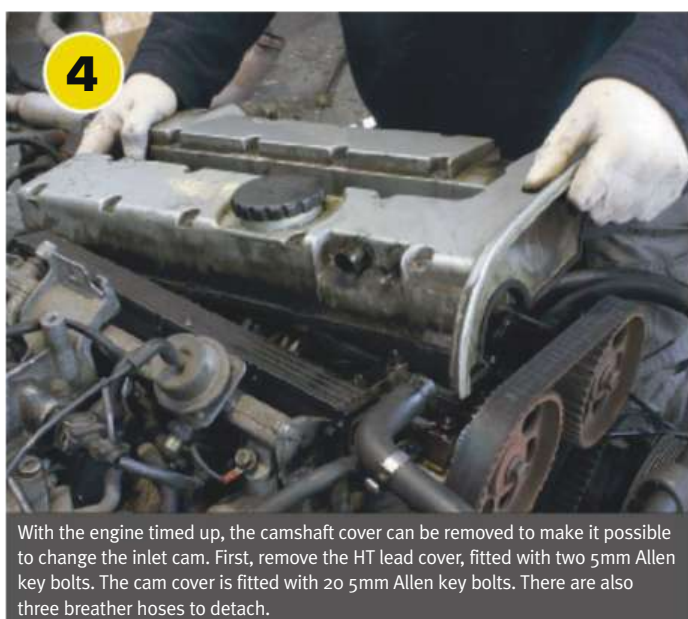
Slacken the auxiliary drivebelt tensioner with a 15mm spanner. This is spring-loaded, so hold it in position and carefully remove the belt. If the engine is in situ, the tensioner can be accessed through the offside front wheel arch.



Remove the front timing belt cover, secured with three 10mm bolts. Once removed, undo six E10 bolts from the front crankshaft pulley and remove the pulley. This is usually easy to remove, but if it's stuck, use a puller.



Turn the crankshaft in a clockwise direction, using an E20 socket, until the timing marks on the camshafts align with the notches on the camshaft cover. A mark on the crank timing cog should also line up at 6 o'clock with a notch in the backplate.



With the engine timed up, the camshaft cover can be removed to make it possible to change the inlet cam. First, remove the HT lead cover, fitted with two 5mm Allen key bolts. The cam cover is fitted with 20 5mm Allen key bolts. There are also three breather hoses to detach.



Slacken the timing belt tensioner via its 13mm centre bolt. This will release the tension on the timing belt and it can be removed with your fingers, and discarded.

6



Renew the timing belt tensioner and both of the timing belt idlers. Plastic idlers can break, so it's best to renew them. All of the idlers and the tensioner are secured with 13mm bolts.

7



Slacken the 15mm inlet cam pulley bolt and remove the pulley. If you don't have an impact wrench, the cam may spin when undoing the pulley bolt, so grip it with a 24mm spanner (look for flats on the cam to secure the spanner).

8



Crack the 13mm inlet camshaft cap bolts from the outside inwards. There are five caps. Undo all nuts, remove the caps and store in order of fitting (they are numbered). Remove the camshaft, noting how it's fitted to help fit the XE cam.

9



Take the XE inlet camshaft and check it matches the C20LET. The lobes will be taller on the XE camshaft. Lower the XE cam into the same position as the old cam with lots of engine oil. Refit the cam caps in their original order and initially tighten from the inside out, then tighten to 20Nm with a torque wrench.

10



Check the new Vernier pulley is the correct size (compare it with the old pulley) and that the timing marks line up. Fit the new pulley to the end of the XE camshaft, grip it with a 25mm spanner (look for hexagonal flats) and tighten the pulley's 15mm bolt to 50Nm, followed by 60 and 15 degrees.

11



Refit the camshaft cover with a new gasket (removed in step 4) and check the timing marks on both camshaft pulleys line up with the notches in the cover. If the cams need to be moved, turn them on their cam pulley bolts.



12

It's worth renewing the water pump when changing the timing belt. This is secured with three 6mm Allen key bolts and is usually stuck to the engine block. To release it, hit the old water pump pulley with a hammer and long screwdriver.



13

Once the old water pump has been removed, clean the mating surface on the engine block with a scraper or sharp flat blade screwdriver – it needs to be clean to ensure that the new water pump doesn't leak.



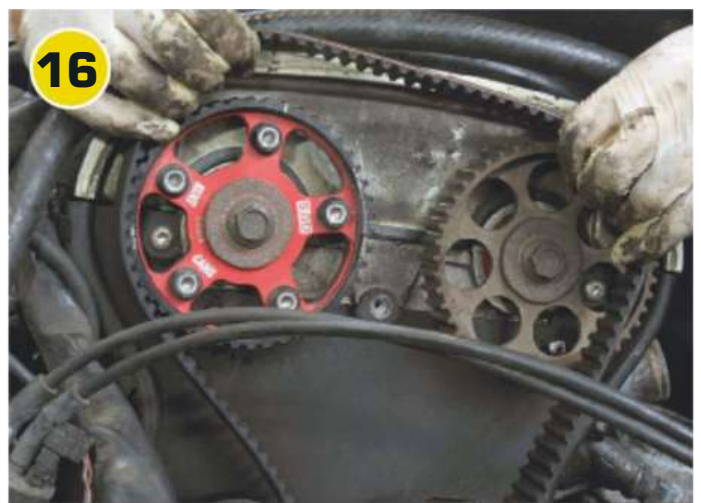
14

Fit a new O-ring to the new water pump with a smear of grease. Fit the new water pump onto the engine, ensuring the notch on its body lines up with a cutout on the rear timing belt cover. Refit the 6mm Allen key bolts.



15

Fit two new timing belt idler pulleys with the original mounting bolts. Fit a new timing belt tensioner with a new centre bolt. Fully tighten the idler pulley bolts, but not the timing belt tensioner bolt – this will be fully tightened after fitting the timing belt.



16

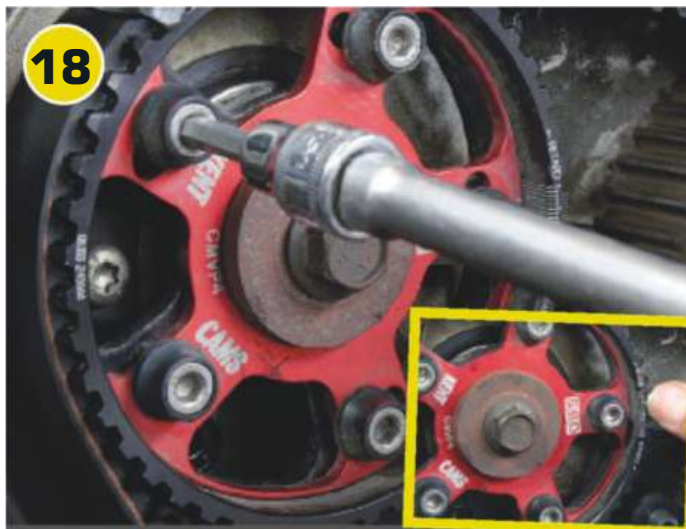
Take the new timing belt and make sure it's the same length as the old one. Fit it around the crank timing cog first, then move anti-clockwise up to the exhaust cam, round the new inlet cam and down to the tensioner. This is the awkward part, so check the cam pulleys don't move.

17



Using a 6mm Allen key, adjust the timing belt tensioner so that its pointer is at the 'new' mark, then tighten the 13mm centre bolt. Complete two manual turns of the engine via the crank pulley bolt, then recheck all of the timing marks on the camshaft pulleys and crank pulley.

18



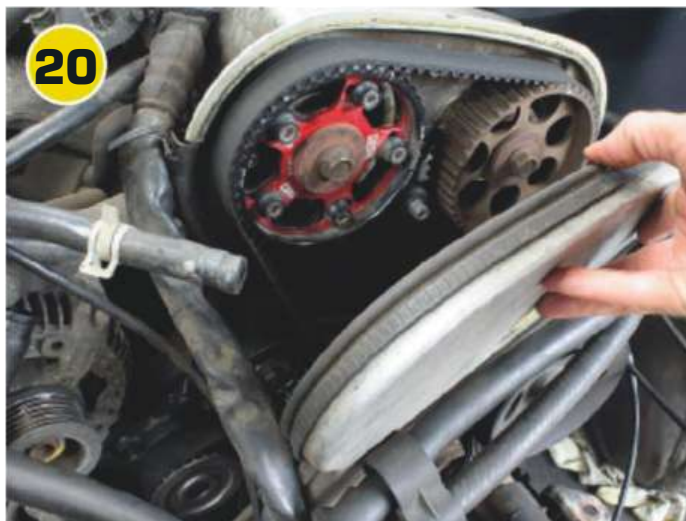
Turn the crankshaft to line up the timing marks, then slacken the 5mm Allen key bolts on the Vernier pulley. Turn the crank until the marker on the pulley is seven degrees retarded, then retighten the bolts.

19



If any of the 17mm mounts for the timing belt cover are fixed to the back of the cover, they will need to be removed and refitted into the engine block. These fixings can also shear when removing the timing belt cover.

20



Refit the crankshaft pulley with its six E10 bolts. The front timing belt cover can then be refitted and secured with its three 10mm bolts, followed by the auxiliary drivebelt (renew if its ribs are cracked or worn).



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Buy & modify MANTA GT/E

Built to take on the Ford Capri, the Manta became a huge success in Europe and is Opel's longest running production car.

The Manta B was conceived with one purpose in mind; to beat Ford at its own game and steal as many sales from the Capri as possible. By the time the Manta B arrived in 1975 the Capri had firmly established its place in popular British culture. Unfortunately, in the UK the dynamically superior Manta never managed to capture the public's imagination in the way the Capri had but it still established a loyal following. The Manta B was kept fresh throughout its production with a facelift during the 1980s and considerable motorsport success to boot. The cars had a reputation for strong performance in the early '90s and many have been tracked, thrashed, crashed or pinched over the

years, though that does mean that the cars that have survived tend to be well looked after (unless you're looking at an oxide coloured project of course!). Prices have increased but the car's inherent character, keen handling and decent performance still remains.

The Manta came in two body styles, a coupe and a hatchback. The coupes generally fetch higher premiums owing to their obvious link to the mighty rally cars. By the time the Manta arrived on the scene GM had decided to merge Vauxhall and Opel in an attempt to save money and rationalise the European arm of their empire, hence the Manta, the Ascona B and Mk1 Cavalier shared a chassis and many panels and trim pieces. Power was provided by a range of trusty CIH engines in a variety of states of tune

and capacity; buyers initially had the choice of a 75bhp 1.6-litre or 90bhp 1.9-litre, followed by a 2-litre version with 100bhp. These early cars are very rare, so our main area of interest is the facelifted 1981-onward range. The 1982 model year saw the launch of the facelifted Manta, the B2. The engine options were either a 1.8-litre OHC unit (the trusty GM 8v found in pretty much every Vauxhall from this period) producing 90bhp or a 110bhp 2-litre CIH, as fitted to the new GT/E model. The rubber bumpers were replaced with body-coloured plastic, front and rear spoilers, sideskirts, a re-styled grill and a new bonnet. The GT/E also got Recaro sports seats, low profile tyres and uprated sports suspension. A steel sunroof appeared in 1985 and the range was facelifted again in 1986 with

new interior trim. The final notable revision was the GT/E Exclusive model which had twin headlights.

Production of the Manta ceased in 1988 and the last cars are on F-plates. The final car to roll off the line was a white GT/E destined for Opel's museum. During its thirteen year history 550,000 Manta Bs were sold, making it the marque's longest running production car.

Since then the car has developed a large following and its exploits in group B rallying have become stuff of legend, meaning that prices for all Manta Bs - from the scabbiest bare shell to the cleanest GT/E - have increased dramatically in the last ten years. As such you have to be prepared to either pay a premium for a good example or put the graft into restoring one that's



BUYING A MANTA GTE

BODYWORK

Like all Opels and Vauxhalls from the period, rust is your biggest enemy. Yes it's a bit of a cliché, but when it comes to Mantas it rings true; buy on condition, not spec. Where the chassis meets the bulkhead can be an area of concern as the seams have been known to split, while jacking points can begin to turn porous if not looked after carefully. Chassis legs will rot from the outer skin inwards and will mean re-manufacturing or buying replacements, the former a harder task than it may appear as they're a 'swan neck' shape. The inner wings and sills are areas to watch as the wings are welded on, meaning getting inside to have a good look is near impossible. The sills require the same level of inspection. If you're looking at a Manta with a sunroof pay close attention to the water channels. They're designed to empty onto the

sills and over time become clogged with gunk and with water constantly running down the sills, rust in these areas is common. At the back it's important to check for water ingress due to perished seals and rubbers, and if there are pools of water in the boot then expect it to have taken its toll on the metal. Areas to be wary of under the bonnet are strut-tops and the battery tray, the latter a known water collection point. Finally, front valances and the area where the nosecone meets the wings can suffer from salt and moisture ingress, a problem compounded on the B2 because of its plastic air-dam which prevents it escaping. It's an '80s GM product at the end of the day, so be wary of rot anywhere there's metal and be prepared to get MIG-ing if you're considering buying anything other than an immaculate car.



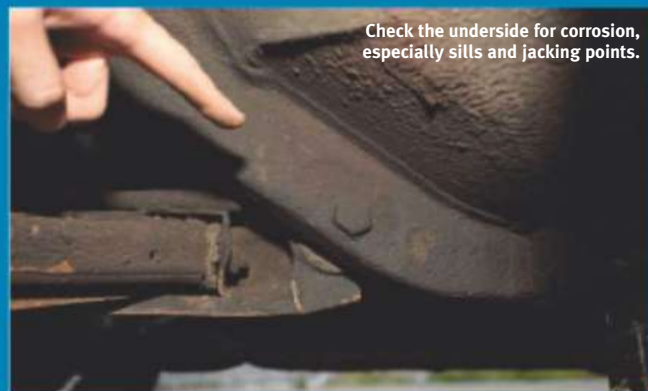
The Manta special editions are now massively rare and highly sought after

seen better days. Don't be put off though as the Manta B has huge tuning potential and has the ability to be highly impressive when fully specced up. Plus, what you'll pay for one is a fraction of what you would for an equivalent Ford. Here's how to pick up a piece of good old fashioned rear-wheel drive goodness!

SPECIAL EDITIONS

Opel certainly knew how to market a special edition in the '80s and the Manta was treated to a number of special iterations over its life, some of which are incredibly sought after

nowadays. Irmscher fettled cars were built to promote Opel's various rally programmes and four were eventually made; the i200, i240, i300 and, of course, 400. All could be had with a variety of special competition orientated accessories, such as big valve heads, sophisticated diffs, uprated suspension, body kits and graphics packs. The i200 came with a warmed over GT/E engine with a chunky cam, the i240 with a 2.4 CIH, the i300 with a beefy straight six, and the 400 with the DOHC 16v 2.4 found in the rally cars. All are stupidly cool and all command big money!



Check the underside for corrosion, especially sills and jacking points.

ENGINE

Both the carburettor'd 1.8 OHC and the Bosch fuel-injected 2.0 CIH are tough engines with few inherent faults in the design but careful checks should be paid to fluids and service items. Attention should be paid to excessive oil splashes along the sides of the block, as well as the usual head gasket inspections. The CIH's timing chains rattle as a matter of course, but this shouldn't continue once the engine is warmed up. Start the car from cold as it allows you to check for any suspect knocking as well as blue or white smoke from the exhaust. 'Tappety' heads are a common occurrence and shouldn't really be a deal breaker as they can be rectified fairly easily. Replacement engines should be fairly easy to find via the Opel Manta Owners Club if the one in your prospective purchase be in poor order. The 1.8-litre cars are very popular with those looking to fit later C20XE and C20LET engines due to the compatibility of running gear.



The 2-litre engine could propel the Manta to 60 mph in 8.5 seconds

SUSPENSION

The Manta's suspension made that of its chief rival, the Ford Capri, look positively stone age (leaf springs? Pah!), though of course the passage of time will have taken its toll on any

car still sporting original dampers and springs. The Manta shared the same suspension setup with the Opel Ascona B and the Cavalier Mk1, so expect independent wishbones with

Bilstein gas-filled dampers and coil springs at the front, and a live axle with trailing arms, telescopic dampers, torque tube and Panhard rod at the rear. Look out for the

usual causes of woolly handling, such as corroded rubber bushes, snapped springs and weeping dampers.



BUYING

INTERIOR

Manta Bs stayed in production for a full 13 years and interior options were updated throughout its life. These cars are functional rather than luxurious places to be, but all trim is hard wearing and durable and most looks distinctly cool in a very retro

fashion. The non-GT/E models didn't get the benefit of Recaro seats, instead making do with rather unsporty items in the usual selection of GM colours including beige, grey and black. Be wary of ripped and collapsed bolsters on the Recaro seats and worn fabric on the base. As you might expect, finding replacement trim and model specific fixtures and fittings is increasingly tricky, though diligent online hunting and trips to the VBOA show at Billing should help out with most items. Joining the Manta Owners Club is pretty much essential for anyone looking to restore or even tidy up a Manta.



Chicago cloth Recaro seats fitted to later GT/E Manta



The Manta may have survived most of the '80s but that dash is definitely from the '70s!

BUYING

TRANSMISSION

The facelift B2 models all came with a five-speed gearbox as standard, a fairly rare feature back in the early '80s. All were praised at the time for their chunky, rewarding cog-swapping actions, though of course even the most recent of Mantas could be forgiven for having a worn 'box by now! Listen very closely for rattling

and vibration from the box itself which can point to the input shaft bearings being neglected and un-oiled. If left unchecked they will seize up and fail. The gearboxes between the CIH and OHC differ, with the latter's Getrag 240 sought after for fitment to the aforementioned C20XE and C20LET powerplants.



Handling can be dramatically improved with fresh dampers

BRAKES

As standard the 1.8 and 2.0 models came with discs at the front and drums at the back. While hardly dustbin sized supercar stoppers, this setup should be more than capable of hauling a standard-ish Manta to a stop with minimum fuss – providing it's in good working order of course. Pulling to one side is often down to sticking callipers, so not exactly a difficult fix, particularly as Mantas are very much a DIY-friendly car.

BUYING





Coupe outline still looks smart today

MODIFYING THE MANTA GTE

ENGINE

The 1.8 and the 2.0CIH are very different engines with distinct characters, though both will benefit from old school tuning. The 1.8 8v benefits from being a GM Family 2 unit, though don't go thinking that all the tuning hardware for front wheel drive Vauxhalls will simply bolt into place. Aftermarket cams, induction (ideally with throttle bodies or throaty carbs) and exhaust will soon see your 8v making much more respectable power. Vauxhall Carlton crankshafts and con-rods can be made to work in the bottom end of the larger CIH, while larger valves and chunkier cams can be fitted to the head. Kent Cams stock a good selection of camshafts for the CIH ranging from mild-road specification right up to full-blown race spec.

A wide range of engines have found their way between the front wings of the Manta over the years, though the perennial C20XE and C20LET are the most popular transplant candidates by a large margin. There is a wealth of in depth fitting guides online and plenty of fantastic first hand advice on the likes of the Opel Manta Owners Club (not to mention hundreds of friendly people), so it's well worth having a go yourself. Starting with a 1.8 is advisable as it means you've already got the correct sump, pickup and gearbox, though don't let that put



C20LET in a Manta? Yes, that's going to be fun isn't it?

you off XE-ing a CIH car. A C20LET clutch and pressure plate assembly will help you mate the Redtop to the Getrag, while you'll need to invest in a rear wheel drive manifold from the likes of Retropower, Ashley or SBD. Fitting an early XE with a distributor will involve modifications to the bulkhead (it makes contact here), though a later dis-pack car will be fine.

Fitting a C20LET is similar but you'll need to consider strengthening the engine bay and fitting an Omega gearbox – the Getrag 240 will soon throw in the towel if asked to deal with tuned LET bhp figures. An Omega R25 28 can be made to work and will certainly be able to handle more power, though you will need to convert from a hydraulic clutch setup to a

cable one using parts from the 8v Carlton range. Fitting an Omega gearbox will also entail finding and using a beefier V6 clutch and flywheel.

A raft of Manta specialists will be only too happy to do these conversions for you, and we've listed some of the best around at the end of this feature.

SUSPENSION

The B is well catered for in terms of aftermarket suspension kits, no doubt helped by their continued popularity in the world of rallying. Various packages are still available, and all will leave you with a fine handling Manta that's fun to push to the limit. Replace tired rubber bushes with brand new ones where possible or go the whole hog and opt for polyurethane replacements, ideal if you're building a competition Manta. Resist the urge to 'slam' Mantas – their suspension geometry suffers

terribly and you'll certainly not improve the handling. Anti-roll bars are very beneficial but are rare and command a premium when they do come up for sale. Similarly, strut braces will help, but if you plan on fitting an XE or C20LET you'll struggle to make one clear the engine itself. Several firms offer coilover kits for the Manta B and these can offer the perfect balance between looks and performance, though it's important to take into consideration the increased bump and rebound you'll incur from cheaper kits.



■ BRAKES

The most common upgrades are the vented twin-discs from the Vauxhall Carlton and Cavalier callipers. The setup is a like-for-like replacement of the Manta's originals, however they're 10mm smaller in diameter resulting in brake pad overhang. Remember to upgrade hoses and fluid as well.

Much like suspension, a number of

aftermarket brake caliper and disc packages are available thanks to the Manta's close association with stage rallying. You'll need to dig fairly deep to net one of these kits but the massive improvement in stopping power they offer is certainly worth it, especially if you plan on pushing for big power or intend to compete.

CONTACTS

Suffolk County Mantas
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info@suffolkcountymantas.co.uk

Retropower
01455 619514
www.retropower.co.uk
enquiries@retropower.co.uk

Opel Manta Owners Club
www.mantaclub.org

Bilstein
www.bilstein.de/en/home.html

Quaife
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www.quaife.co.uk

A&M Conversions
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www.amconversions.com
amconversions@gmail.com

SBD Motorsport
0208 391 0121
www.sbdev.co.uk

Kent Performance Cams Ltd
01303 248666
info@kentcams.com

■ WHEELS

Manta B GT/Es came with Ronal 6x14 inch alloys with an offset of ET30. These work very well with the '80s styling. If you want to swap them then dished motorsport style wheels can work very well. Minilites, ATS Classics and Compomotives have been fitted to great effect in the past, as have staggered BBS wheels. If you're building a 400 replica then you're pretty much obliged to fit chunky five-spoke Ronals or Revos, which is no bad thing!

Big fat sexy Revolution alloys on a wide-arch Manta are nice



■ TRANSMISSION

As already stated, the Getrag 240 should be more than happy dealing with up to 200bhp or so, though of course you'll have to make some allowances for the age and condition of your particular engine. The Omega route is perfect if you're chasing big bhp and these units are still cheap and easy to find, plus there's a lot of useful fitting info available online.

Ford Type 9 and T5 transmissions have been made to work in the past and firms like SBD will be able to sell you conversion kits, though of course you'll need to 'convince' your transmission tunnel to accept them. Various limited slip differentials are available, though you'll only truly need one if you're setting out to build a big-power nutter of a Manta.



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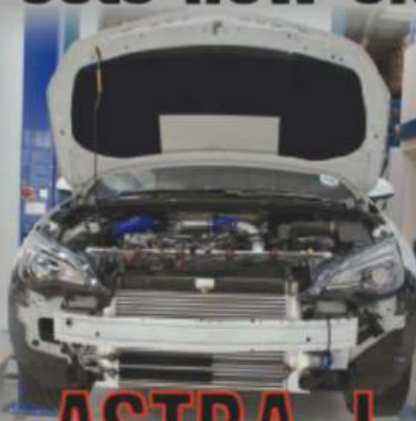
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STOP IT

@ Hi, I'm looking to upgrade to a bigger set of brakes for my Mk3 Astra. Seemingly I can fit the 308mm vented discs and use Cavalier calipers but I can only seem to find 308mm discs in 4-stud plus the Calibra has the same calipers as the Cavalier. Can you tell me how I would go about doing this conversion please as my current brakes are useless. Also, how much will this cost and where is the best place to get the parts from. Thanks.
Jack.

A As you'll be aware, the Astra Mk3 is 4-stud and shares the same PCD as most other 4-stud Vauxhalls. The GSi has the standard 256mm discs and calipers as fitted to the Cavalier SRi and GSi plus various Calibras. Changing the 4-stud brakes isn't the most straightforward of tasks however you can run Meriva CDTi discs which are 280mm along with the Calibra / Cavalier Turbo late spec calipers and carriers which are the same as Vectra V6 items. Or, you can buy 308mm 5-stud discs intended for the likes of the Mk4 Astra GSi Turbo

Upgrading the Mk3's brakes gets a little complex if you want to go 5-stud



and redrill them to suit and then source a set of Vectra B GSi carriers. You will need to turn down the edge of your hub to fit the discs though.

On the other hand you could upgrade your standard sized brakes to fast road spec with Mintex MDB1144 or EBC pads, grooved discs and HEL

braided lines and then refresh the rear while you're at it. Which of the two options is best is down to a matter of personal opinion.

ALL CHANGE

@ I am a regular reader of *Performance Vauxhall* and I would like to ask your advice on the following issues: I drive a Vauxhall Zafira VXR with 75,000 miles and Vauxhall recommend that the coolant, gearbox oil, and the power steering fluid don't need to be changed at any stage. My dealer tells me these fluids should be checked at regular servicing schedules and be topped up. What would you do as I

feel this far exceeds the normal life of such fluids. Should I carry on with the same fluids regardless and top them up or would you change them instead? Thanks in advance.
Marvin

A There are no recommended replacement intervals for the other critical fluids. What we would do is down to personal preference. If the car featured in our long term plans or was extensively modified or was used

on track then it could be argued that fresh fluids would be beneficial and would arguably be worth the cost of replacing them. If the car was a short term solution or is used very sparingly, then the expense of replacing said fluids may be deemed a little pointless.

Extended service intervals are as a result of fleet and private buyer demands, bear in mind back in the good old days of the C20LET turbo, Vauxhall recommended oil changes

every 3000 miles. This then changed to every 10,000 miles with the Z20LET and then changed to every 20,000 miles with the Z20LEX. Fluids are the blood of a car, changing them certainly won't do it any harm. The actual task of replacing these fluids is time consuming and a bit messy so if you don't fancy taking it on yourself on the drive, your dealer or one of the specialists will be only too happy to assist.

It pays to ignore the recommended service intervals, and change fluids more frequently, especially if you have a turbo



BELT UP

@ I've got a Corsa with a CzoLET fitted and last week the head gasket failed. I stripped it down and replaced the gasket but now that I'm putting it back together I've hit upon a problem with the timing belt. I've followed all the online guides and the Haynes manual for a 2.0 16v but the belt is slack down the front side and then it's too tight to go on the exhaust cam. Or, if it does go on fine it ends up being one tooth out. I've tried it loads of times but it's just not playing ball and my patience is about to expire so gonnie help me please!
Tom.



A The majority of multi-valve Vauxhall belt setups are fundamentally the same and so the same basic process applies. The DIY manual is fine but there are a few things to be aware of and a few wee tricks. Start by making sure the rollers are fitted correctly, too tight is as bad as too loose. Make sure the water pump locating lug is seated in the recess in the block and you've used a new seal and a smear of sealer. Next, check the automatic tensioner is on but slack enough to turn the adjusting cam freely with an allen key. Align the marks on the cam pulleys with the notches on the cam cover and use a lock tool to hold them in place and finally, check the

mark on the crank is lined up with the mark on the oil pump at 6 o'clock. We always remove the auxiliary drive belt pulley when doing belts, it's much easier than leaving it in place... unless it's seized on the crank.

Start by placing the new belt round the exhaust pulley and use a peg or a mate to temporarily hold in place. Work down the front, go round the first pulley and then rotate the crank anti-clockwise by about 5deg, then feed the belt round the crank sprocket. Turn the crank back clockwise on to its mark and if you've judged it right, the belt should now be pulled tight down the front. If so, then

go round the tensioner, water pump and finally the inlet cam sprocket again making sure the belt's pulled nice and taught as you go. Set the correct tension by turning the tensioner cam with a 7mm Allen key until the pointer is on its mark, nip the 13mm bolt up and then turn the engine over a few times by hand. Check and readjust the tensioner if required. Turn it over again and ensure everything lines up. Recheck all your bolts, fit the crank pulley, timing cover and drive belt. If you're still unsure, enlist some help as timing belt errors are usually very expensive.

EXHAUST-TING

@ Morning gents. I'm looking at getting an exhaust for my 2009 Corsa VXR but there are so many

options, I'm really not sure what to go with or whether it's better to get one made up by a specialist company. The other issue is people have said the

standard exhaust is fine and it'd be a waste of money and I'd be better getting the car remapped first. Any thoughts? Cheers.
Umar.

A As with many questions of this nature, there is no right or wrong answer but what we would say is that yes, the standard systems are fine however they are always designed to fulfil certain parameters, i.e noise restrictions, gas flow and longevity. The other issues being, as soon as you start increasing the power you will soon find the standard system is restricting the gains, hence larger bore exhausts along with pre-cat removal and sports cats are favoured. There is no 'best' but it could be argued that a custom system could be tailored to your exact needs, but beware as there are a number of shoddy outfits out there so do some research first.

A remap is good but it's always worth planning ahead. Fit the hardware (intercooler, exhaust etc) then get it mapped to get the best possible gains.



Quick fixes

Q Guys, been told my 2006 Astra SRI's random misfire could be down to the plugs. Been a while since I tinkered with cars but is this still a straight forward task?
Ben

A Like many models of this era, it has a coil pack. Remove the plastic engine cover, take out the Torx bolts that hold the coil pack in place, disconnect the multi-plug, gently lift the coil pack out, replace the plugs and rebuild. Very simple task.

Q Hi there, my 2014 Insignia has just had its flywheel replaced under warranty. I want to know if this can be replaced with a standard clutch and if so, how much would it cost?
Sav

A The clutch isn't an integral part of the flywheel and whilst dual mass flywheels are prone to wear a) it's under warranty and b) there is no solid, one piece replacement available. Limited details but perhaps ask your dealer to comment if you feel it's failed prematurely. It's not uncommon.

Q Chaps, my Vectra VXR has developed an oil leak after it's been driven. It seems to be towards the rear of the engine. Any common faults or suggestions? Cheers,
Kelly.

A The 2.8T is actually pretty robust and even scouring the forums didn't throw up any common issues. Best bet would be to clean the area with brake cleaner, give it a run then get under it and try and pinpoint the source. Could be a number of things – cam cover seals, turbo, crank seal etc.

Q I've almost finished doing a top end rebuild on my ZzoLET however I've just been asked if I want stretch bolts for the head. I wasn't aware there was a choice... so, what's the score?
Daniel.

A Honestly... we're with you on that one. Most GM applications use stretch bolts, hence they need to be torqued down in specific stages. If in doubt, give the chaps at Autovaux a shout and they get a set out to you in double quick time.

CRACK PIPE

@ Guys... I've got a weird issue with the intercooler and top pipe on my Astra VXR. The car has a Forge front mount fitted and a mate of mine made me up some stainless steel boost pipes which run up beside the battery and to the top hat with an enlarged EDS one. It was fine for ages but then it cracked one of the welds on the pipes so I had it fixed and now it's split the top hat. I've checked that everything is secure so I can't understand what will be moving and causing the cracks? My local garage are no use but have confirmed the engine mounts are fine. I'm stumped! **Matt.**

A Without knowing the exact setup up you have it's hard to say for sure but we've seen issues like this before with solid boost pipes. It's not so much the pipes, it's the fact the cooler and pipes are fixed but the engine is moving and thus, something will give. The solution would be to add a couple of extra silicone sections and don't clamp the boost pipe to the body. You'd be amazed at how much an engine will move under load so even with good mounts, there can still be a good couple of inches of movement. Poly mounts will help reduce movement,



Silicone joiners can actually be beneficial for boost pipes

especially if you fit the Powerflex insert to the front lower bush but bear in mind, poly bushes can increase harshness and vibration... which isn't a huge issue but just something to be

aware of. The same applies to exhausts, they do need an element of give or else you'll stress the system and it'll fail at the weakest point. Cheers.

MR BUMP

@ Hi lads. I'm putting the finishing touches to my Astra GSi Turbo track car and having just fitted GAZ coilovers and had them set up and the car corner weighted, the guy at the alignment centre said I might suffer bump steer because it's now quite low. He then went off on a rant about steering inclination angles and increased toe wear and I was like "What...?" but is this something to be aware of and can

I do anything to sort it? Thanks. **Dev.**

A Honest answer.... get Googling! Steering angles and the like are a pretty complex topic so nigh on impossible to explain so some diagrams and Youtube videos will enlighten you, but basically, the more you lower a car, the more negative camber you introduce (unless it has a solid rear beam, but we're talking

about the front here!) which means the wheels tip in more at the top. The other issue with excessive lowering is the steering arms out of the rack would normally sit parallel to the ground but as you go lower, the arms start to angle up... in turn this shortens their reach which in turn creates a bigger toe out angle, ie the wheels are no longer parallel to each other.

Bump steer is a by-product of this change in reach and increase in steering angle. In essence, as the suspension compresses down while you drive, the wheel moves up, negative camber increases, the steering arm angles up, shortens the reach and increases the steering angle. The solution is to try and keep the steering angles level, even when the car is lowered. Some people move the rack down. Some people fit the track rod ends under the hub mounts rather than on top. The pros will use bespoke fabricated rose jointed track rod ends and extension pieces. Sounds technical and it is... as a result it's not something to be taken lightly. Seek advice, buy the best as getting it wrong could be fatal in extreme cases, so we'd say leave it be. It's an issue but you'd struggle to notice it on the road or on a track day.



Lowering a car properly isn't as simple as bolting parts on

Quick fixes

Q I'm thinking of a brake upgrade for my Astra VXR. Would fast road pads be ok with the standard discs and also, are braided hoses worth the investment? Thanks in advance, **Callum.**

A Yes, you'll be fine with a pair of good quality discs though expect them to wear a bit faster than they would when using standard pads. Braided hoses improve pedal feel so are worth considering and whilst you're at it, do a brake fluid change.

Q In line oil filters for turbos? Yes or no guys! **Craig.**

A In normal applications, you really shouldn't need one. We'd be tempted to use a very good grade oil and change it regularly. A lot of the turbo guys recommend changing it every 5,000 miles.

STUD MUFFIN

@ I have 1997 Calibra 16v and have bought Astra Turbo wheels on the internet. My Calibra is 4-stud and the wheels are 5. I know the wheels will fit because I have my 17in wheels with a 215/45x17 tyre now. How difficult would it be to change to have the 5-stud and what parts would I use? **Lukas**

A Your Calibra, like Cavaliers, Mk3 Astras, Novas and Corsas will have a PCD (pitch circle diameter) of 4 x 100mm and the Astra Turbo alloys you have bought will have a PCD of 5 x 110mm, the same as Vectras, Cavalier Turbo and V6, Mk4 Astra etc. The Astra Turbo wheels are 7.5x17 (7.5 wide, 17 diameter) with an ET47 (47mm offset) and came as standard with 215/40/x17 tyres.

You will need to convert the Calibra from 4-stud hubs to 5 and then the Turbo alloys will bolt on. The Calibra is relatively simple to convert. A Cavalier Turbo or Calibra V6 will be the ideal donor car as you can remove the entire 5-stud front strut assembly and bolt it directly to your car. At the rear, you can fit the hubs from the Cav Turbo or Calibra V6/Turbo or you could swap the entire rear trailing arms, though this is quite a big job. These 5-stud conversion parts are getting quite difficult to find these days but try the likes of Migweb, Club Calibra or the Cavalier pages on Facebook.

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STAFF CARS

What we've done with our cars this month

THE TV FLEET/THIS ISSUE

JULIAN VECTRA C 1.8VVT

BOUGHT 2013

STATUS The MoT's good for another year now and the front wheels are now facing the right way!



DAVE CAVALIER TURBO

BOUGHT 2003

STATUS Ah, excuses excuses – yet another month has passed with no activity.



DAN FURR IRMSCHER MV6

BOUGHT 2014

STATUS The MV6 nears completion with some engine work and new screen.



JAMIE CARLTON

BOUGHT 2012

STATUS Jarkle's still at something of a stalemate with the Carlton. Progress soon hopefully!



DAN FURR MV6

WINDOW SHOPPING

Buying car parts through necessity rather than choice can be a frustrating exercise, but almost every failed, tired or broken automotive component presents an opportunity to upgrade with a vastly improved replacement item (that's what I've been telling myself, anyway!). A prime example of this train of thought comes in the form of my MV6's nifty new windscreen.

I noticed a hairline crack stemming from a delaminating nearside bottom corner of the car's factory glass while I was tidying the engine bay. Spreading at an alarming rate, the damage was soon making its way up and across the body of the windscreen. As I had no choice but to source a suitable replacement, I softened the blow by getting hold of new glass complete with fittings for a variable speed windscreen wiper rain sensor kit. A kindly Vectra C donated its rain sensor, interior mirror, wiring and plastic housing to the cause, and I'm looking forward to seeing this novelty feature in action as soon as the car is up and running.

Talking of which, I've been sourcing plenty of new parts for the MV6's Y32SE engine; both cylinder heads have been stripped, cleaned and rebuilt with new valve stem seals, and I enlisted the assistance of the guys at Injectortune when it came to refreshing the 3.2-litre lump's Bosch fuel injectors.



Over time, dust particles and other contaminants can cause injectors to run below their full potential, and spray patterns can be vastly affected by loose matter floating around a car's fuel system. Injectortune stripped, ultrasonically cleaned and rebuilt each of my injectors (complete with new

filters and o-rings) before shipping them back to me with a 'before and after' report highlighting the improved static flow of each unit. Better still, a forward leak detected on injector number two has now been completely eradicated thanks to this excellent cleaning process, and I already know

that smoother engine operation and quicker response is a given thanks to the exact same work carried out on the injectors of my V6-equipped Mk3 Cavalier CDX a few years ago. Nice!

Meanwhile, parts continue to pile up as I tinker: a new GM header tank, oil cooler kit, throttle body gaskets, oil

Refreshed injectors courtesy of Injectortune



Y32SE heads have been stripped, cleaned and rebuilt



JULIAN VECTRA C 18VVT

MOT PHOBIA?

Ah yes, the annual nail-biting marathon commences once again. There were the usual groundless fears, imagined issues and potential pitfalls. Surely the Vectra can't wing it through again without a problem? I had checked everything I reasonably could without access to a ramp to check the car fully underneath, but I still had one fear which was the whirring whiney noise coming from the front nearside. Various second opinions and checks had so far come to nought, but I had noticed the N/S front tyre had worn somewhat on the Proxes' shoulder, and more general wear right across the tread than on the opposite wheel, which suggested something not right. The Vectra is very much guilty of some freakish tyre noises when they're worn (I remember the low rear tyres not long after I bought the car that had me totally convinced there was a wheel bearing going), so with that in mind I switched the front tyres over before the recent MoT, not by way of trying to con anyone you understand, but in the interests of evening out wear.

Test day came and I sweated it out in the garage's reception expecting bad news. There wasn't any! Really? Yes, a somewhat worn, now offside, front tyre was the only advisory. I all but blurted out "Are you sure that's all?" Following



Putting the wonky wheels straight, or tracking, as it's sometimes known

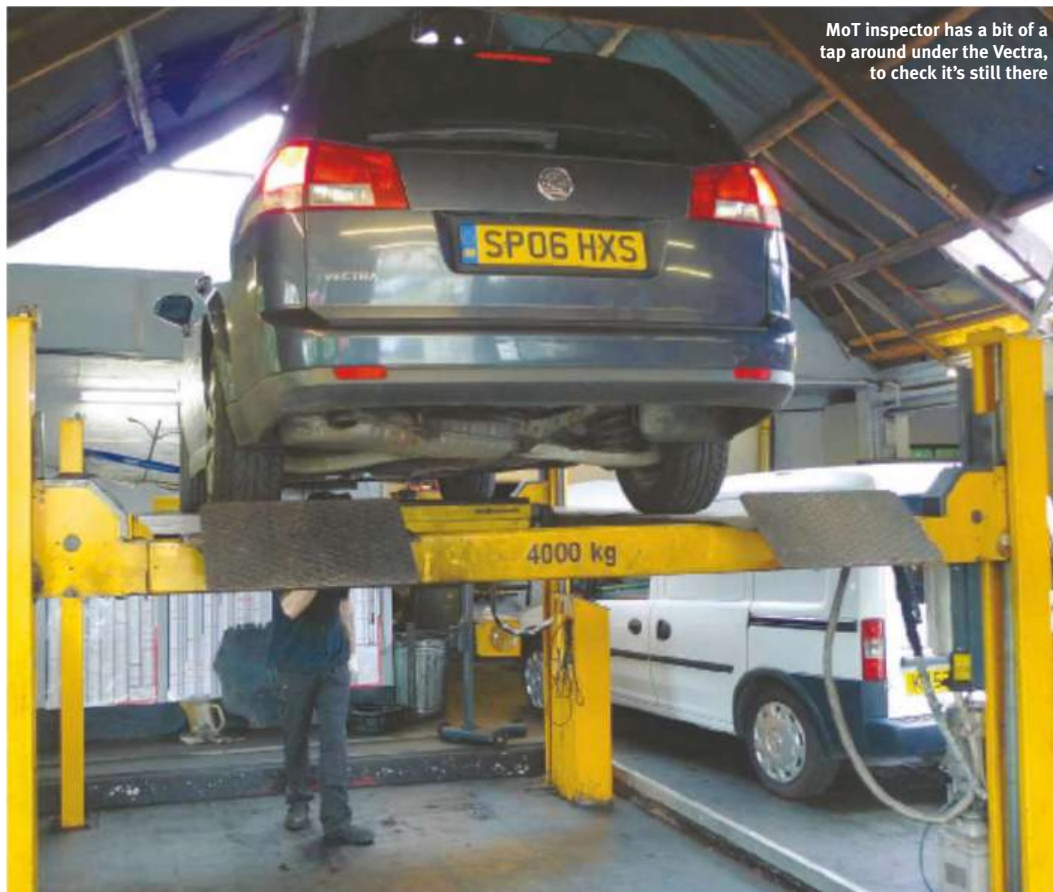
this non-event I went and got the tracking checked at Bathwick Tyres, Midsomer Norton branch and unsurprisingly it was discovered that the front wheels were toeing in, which might explain the tyre wear. But that noise? Well, it's certainly abated somewhat, but still to be heard on occasions. Ah well, no-one's found anything life-threatening, so I'll keep an eye, or ear out for that one, not to mention fingers crossed.

Apart from that, there have been the

usual minor issues to sort, and a very long-awaited oil change – too long really. My main problem was access to the underside of the car, and not having the old company workshops any longer at my disposal, I need an alternative. I paid a visit to good old eBay and purchased a pair of Cougar steel ramps – the wide ones, which are about the right fit for the width of Vectra's tyres (the 'standard' ones must be made for Model T Fords or something!). Unfortunately they were

not the right angle and height to drive the Vectra onto without first removing the bumper either purposely or otherwise. I already knew the ramp extensions were a distinct possibility, so I purchased those too – for 'low clearance cars'. Seriously?! It's a standard Vectra! Oh well, they do the job just fine and an oil change was duly effected while managing to destroy a small (and cheap) socket wrench while trying to remove the Torx-fit sump plug. A can of engine flush was added and I emptied the old slops into a large plastic paint bucket – which I then had to very tediously funnel into one of the used oil packs for disposal.

At least the ramps have been a blessing and I can access and check much more of what's happening or going wrong under the car. Wish I'd remembered to check the N/S front foglight while I was under the car doing the oil change. The lamp housing has been harbouring condensation for some time, but still working okay. So having forgotten to check it while under the car, only a matter of days later I got the warning on the display panel and bulb warning on the dash for that foglight bulb! Anyway, with the car back on the ramps once more, I wriggled underneath, extracted the lamp housing from the bumper from behind (the Haynes manual says to remove the bumper!). It was a bit of a fiddle as there's one bolt over the top of the housing that you can't see from beneath, so that was done largely by feel and some cursing. And... the bulb looked absolutely fine to me, but after some checking over the unit, I found the male terminals for the external plug connection were corroded, and after a quick scrape with a screwdriver, all appears well. For now anyway.



MoT inspector has a bit of a tap around under the Vectra, to check it's still there



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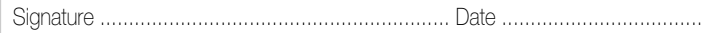
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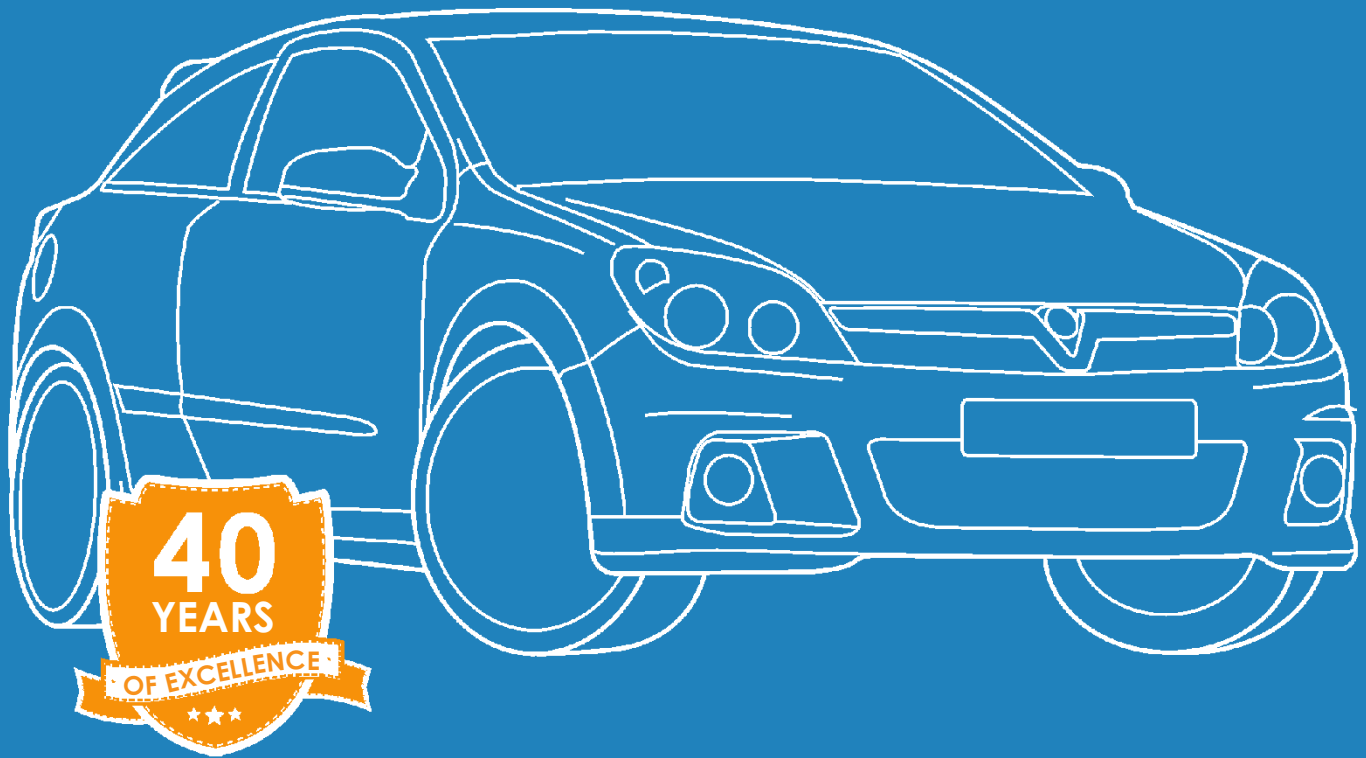


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- ☐ FOR SALE ☐ WANTED
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- We reserve the right to refuse any advert.
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- Telephone numbers starting '070' are usually from our affiliate website carandclassic.co.uk. If you get a message which says 'invalid' this usually means the item is no longer for sale.

Astra**ASTRA**

£POA. Braking Vauxhall Astra bertone coupe 1.8 on a 2000 plate. It's the 1.8x cable throttle. Good engine no leaks good oil pressure. Alloys with good tyres. The colour code z20h. Car is based in Manchester can post some parts and some collect. Has good exhaust system. Good body panels few small dings and scratches no rust. 07568 571997 (SN)

ASTRA

1990, £185. Starmist (MK 2) MoT Nov. C/L E/W. New sills, rear drums, slaves and shoes. Recently serviced (Inc cambelt). Only 11 left OTR. Reluctant sale. Essex. 01245 264327 (SN)

ASTRA

£3,300. 264 bhp. Normally aspirated. MSA Logbooked. Professionally built. Quaife LSD. Many spare tyres. Special brakes and steering. Bargain. Cost £30,000+ to build. Selling due to drivers old age. Highland. 07592 348110 (SN)

ASTRA 1.4 GLSi AUTO

1995, 19,000 miles, £995. Full service history (15 stamps) lots of maintenance receipts and old MoTs. 10 months MoT (no advisories) car drives as new, excellent original condition (no accidents, no rust, never been welded) interior like new. Needs to be seen. Cheshire. 07703 486396 (MC)

ASTRA 888 COUPE

2002, 7,300 miles, £4,200. Number 28/100, Very Rare Car, 3 Previous Owners, Part history (mileage's in book but no stamp for 6 previous services) 8 months MoT, Good Condition. Dunstable. 07923 067199 (SN)

ASTRA CABRIOLET

1991, £700. MkII 1600 Cabriolet. MoT 2016. New exhaust, suspension mountings, 15" alloys, not been welded. Great driver, new roof in 2014, cost £500, bit of TLC. Towbar fitted. Lancashire. 01772 733148

ASTRA GTE

1987, 75,000 miles, £POA. The car is in immaculate condition inside and out looks like it has been pulled out the showroom from new. The car really does drive like new with no noises knocks or bumps and still pulls lovely. It has just had a full service including fan belt, water pump and cambelt kit so its ready to go. Bedfordshire. 07581 156182 (MC)

ASTRA GTE 16V MK2

1990, 131,000 miles, £3,300 Offers Invited. It has been fully rebuilt in the past, it is very clean, it has high mileage but for the age isn't bad at all, and has been very well looked after, this is seen by just looking through the receipts, there are very few marks in the paint and stonechips. Yorkshire. 07496 139484 (MC)

ASTRA GTE PICKUP RED TOP

1986, £6,295. Custom build in arden blue with contrasting blue and black interior and of course the all important digital dash. The car is in great shape outside, inside, underneath and under the hood. You could eat your dinner from the red top engine. Scotland. 07795 600983 (MC)

ASTRA MK2

1991, £3,750. 1.8 SXi, in very good condition, not much to make concourse, lots of work done, new wheel arches and back of sills been waxoiled, original service small history file, long MoT. West Sussex. 01273 495734

ASTRA SRI 190

95,000 miles, £3,100 ovno. 2 months MoT. Very clean, vxr seats front and rear, running 286 bhp with print out Koni adjustable suspension. Engine spec to match to list, cam eds inlet manifold hybrid k04 lightened flywheel loads, must be seen will be at trax. 07477 601769

Cavalier**CAVALIER**

1986, £3,500. Excellent Condition. Restored in 2000 with one owner since. Sandblasted and resprayed Peugeot Flip Silver with single wiper conversion, sunk bonnet vents, rear spoiler, SRI 130 front, side and rear skirts Full 12 Months MOT. To much to mention. Northern Ireland. 07719 272186 (MC)

CAVALIER CONVERTIBLE

1986, £POA. Owned since 1988. Regularly serviced. Very reliable, in good condition, but need welding repairs, bulkhead and inner wheel arches. Ideal project for enthusiast. A moderately rare car. Roof is perfect. Surrey. 01883 343483 (SN)

CAVALIER G.L.S HATCH

1995, 95,000 miles, £375. 2 Litre twin O.H.C Engine as in SRI. Metallic green. MoT 25/4/16. Owned and garaged for 11 years. Please call for more details details. South Norfolk. 01953 789991 (SN)

MK2

1987, 44,000 miles, £4,400. 5 door hatchback Cavalier Sri sunroof mode. Garaged from new and then dry stored in a heated barn from 2003 to 2014 then came out and had a full mechanical overhaul. Tape deck, genuine original GM floor mats, original dealer plates. No wear on the interior. No sagging of roof lining. Genuine buyers only please. Yorkshire. 07479 283307 (HP)

Chevette**CHEVETTE**

9,000 miles, £0 offers. Undersealed properly from new, so body is excellent. Drives like new. One previous elderly lady owner. V5 present. Water pump has slight leak - new pump supplied with car. Paint faded in a few spots. 0035387 2631931 (SN)

CHEVETTE L

1982, £820. Four door saloon, good runner, good interior, no rust. Somerset. 01458 210520

Corsa**CORSA**

2005, £1,295. Car van, rare future classic, diesel, MoT, 1500cc, low mileage, in good condition for year, 2 new tyres, p/steering, roof rack, CD player, radio/cassette, (new sat nav optional), a bargain. Essex. 07926 117383

CORSA

2001, 50,044 miles, £1,650 Or near offer. 3 Door Comfort - Auto- 1.4 Petrol - An Ideal 1st Car. MoT until May 2016 with NO advisories. This is a super little car which belongs to my wife. It starts on the button and is clean, smoke free, has no rust or corrosion and drives very well. Somerset. 07976 943857 (MC)

MONTANA

1995, £Around £1,000. 3 door hatchback 1196cc, low mileage, in excellent condition, ready to use and enjoy. Lancashire. 01524 406398

VAUXHALL CORSA VXR

£Offers. Standard rear diffuser, intercooler, white V grill, black wing mirrors ex glass (damaged), clutch, flywheel, JS performance dump valve, hose (blue), CD 30 black radio. Cheshire. 01606 551200

Cresta**PB**

1964, 9,999 miles, £POA. Hydromatic complete. The body is gone, standing too long at the see. It has got 60s woolfrace wheels. On a Sorn. East Sussex. 01273 589835 (SN)

Nova**NOVA**

1992, £3,750. Competition 1-4 135 bhp, full race engine, gearbox by John Noble, Quaife gear kit, LSD paddle clutch, coilover suspension, full roll cage, GRP bonnet, hatch wheels tyres, excellent condition, phone for details. Essex. 01245 262292

NOVA GTE

1989, miles, £750. 1.6 GTE. 2 Owners from new. Totally original - Requires Body Restoration. Has been stood for some years. Starts & Runs. Well worth re building. Birmingham. 07801 366581 (SN)

Omega**OMEGA ESTATE**

£400 ovno. Auto, M reg, needs restoring, ideal project, roof rack, alarm, alloyed wheels, good inside outside, future classic, must be towed away. Essex. 07926 117383

Vectra**VECTRA**

1999, £800 ono. Excellent runner. GSI interior. Custom body kit. Cobra sport exhaust. Dual exit Pipercross Venom filter. Too many mods to mention them all. May sell parts separate. MoT November. Northumberland. 07707 975210 (PB)

Viva**VIVA ESTATE**

1974, 45,000 miles, £2,800 or near offer. MoT 28th June 2016, Tax exempt. very good condition, body and paint very good, interior very good, runs and drives great, rostyle wheels and tyres in good order, twin weber carb and manifold fitted, centre back stainless exhaust. Very rare car now and ready to drive and enjoy. Any questions phone. Cheshire. 07958 598167 (HP)

VIVA ESTATE HB

1970, £600. In need of restoration to the front wing and rear arches. Parts to be sold separate. Break pads, clutch, exhaust. Dunfermline. 07513 584847 (PB)

VX4/90**VX4/90**

1962, £2,950. Good solid car, full MoT, very clean condition, may accept part exchange smaller classic car. This car is very clean. Yorkshire. 01302 564879

Wyvern**WYVERN**

1953, £3,800. Tax and MoT exempt, running restoration, good condition, needs minor work to complete. Middlesex. 01895 237820

VEHICLES WANTED**ALL VAUXHALL BRAVA TRUCKS AND ISUZU TRUCKS**

Wanted. Any year clean or rusty we are very good buyers. (T). 07775 998628 (JW)

ANY CLASSIC CAR

1920, £Any, Wanted. In any condition. Any make or model. Please call Dave. West Midlands. 07858 705005 (RB)

CLASSIC CARS

1930, Wanted. Old classic car wanted in any condition. West Midlands. West Midlands. 07858 705005 (RB)

OPEL MANTA COUPE

Wanted. Or Opel Ascona. Anything Considered. Cash Waiting. 07901 993292 (MC)

VAUXHALL VICTOR

Wanted, Wanted F type or Vauxhall Cresta PA or Austin A55 pick-up or van. Herefordshire. 07528 642560 (PB)

PARTS FOR SALE**CORSA EXHAUST**

£60. Sports model, new, no back box, will fit Corsa 1993 up to 1999, £60. Also back box for Astra 1990, new, £25. West Midlands. 01543 378719

DYNAMICS ALLOY WHEELS X4

£250. To fit Mini (pre 2015). Vauxhall Corsa. Renault Clio. Ford Fiesta. 4 stud Honda or 4 stud Rover. Leicestershire. 01530 231975 (PB)

VARIOUS

£Offers. 1.8E Vauxhall engine. Carb or injection, both available. State 3. 300 miles since overhaul. Alloy sump. 4 core BMC mini radiator, as new. Hampshire. 07979 697246 (RB)

VAUXHALL ASTRA VAN

£120. Rear seat conversion plus bulk head gate/guard, both stored since new/unused, buyer collects. Phone am weekdays. Lancashire. 01617 960816

VAUXHALL CAVALIER

£POA. Various Vauxhall parts for sale inc. MK1 Cavalier, Opel Monza parts. Many lamps, book manuals etc. Phone for list or sell complete. Essex. 07535 973500 (JP)

VAUXHALL CAVALIER

1970s, £30 plus p&p. Electric retractable ariel. Brand new. 07831 748762 (SN)

VAUXHALL CAVALIER MK1

£POA. Parts for sale inc 20/5 rear lamps, N/S rear lamp, various body mouldings / front road sprint. Phone for full list. Essex. 07535 973500 (JP)

VAUXHALL CORSA

£POA. 2007 onwards, tailgate spoiler with brake light- please call with offers. Bristol. 07502 032532 (JW)

VAUXHALL FRONTERA / FORD CAPRI

1996, £POA. 2 front wings and plastic inserts in very good condition, £30. Tailgate for Mk II Capri, no glass, in very good condition, £20. With rear spoiler. Various other items. Call for details. West Yorkshire. 07808 887093 (PB)

VAUXHALL VICTOR FB

£60 the set. FC, and Bedford CA van crankshaft bearings, to fit 1500cc & 1600cc petrol engines. One full set of engine bearings for sale (mains, big ends and thrusts) all standard size. Boxes are tatty through long term storage but bearings are perfect. Plus p&p. Sunderland. 07889 355216 (SN)

VAUXHALL VIVA HC

£POA. 1x engine 1256cc from 1974. 42,000 miles. £65 ono. 1x gearbox £35 ono. 1x front windscreen £30. 1x front grille £18 ono. Glasgow. 07939 699201 (PB)

VAUXHALL VX490

£70 the pair. Pair of carburettors on manifold. Complete ready to fit. Very good condition. West Midlands. 07961 909983 (PB)

MISCELLANEOUS**12 VOLT WINCH**

£50. Phantom 2500kg pull winch, complete as new, with instructions and accessories. Staffordshire. 01543 418993 (RB)

3 GARGOYLE MOBIL OIL SIGNS

£60 the lot. Enamel, steel Mobilgas gargoyle, vacuum oil company. Surrey. 07534 431198 (RB)

BADGE

£95. AA enamel sign (not tin) 8 inch dia 2 fixing holes as in AA vehicles. No damage. Post free. Surrey. 07534 431198 (SN)

BSA D1

1963, £3,000. Genuine rare! Telegram boys Royal Mail motorcycle. Post Office red. 125cc. Stunning nut and bolt restoration. Show use. All rare G.P.O. fittings and pouch. History, photo file. Mint condition. New everything?. Avon. 07840 400569 (RB)

BUGATTI BADGE AND 3 RACE BOOKS

£48 the lot. Lewes, 1935; Prescott, 1964; 39th National Rally. Surrey. 020 8399 7541 (RB)

CAR TRANSPORTER TRAILER

£995 ovno. Car/van/4x4 (or even caravan). 16ft x 6ft bed (overall 21ft x 7ft 6in). Heavy duty, twin axle, ramps, winch (manual), lights, socket, new brakes/tyres, JCB enamel paint. Tows well. Derbyshire. 07474 948711 (RB)

CARAVAN AWNING

£300. Dorema. Suitable for 16ft-17ft caravan. Nearly new. V.G. condition. Size 10, red/grey colour, 875-900cms, brand new poles included. Free delivery. Dorset. 07971 385242 (RB)

DIE-CAST MODELS

£All cheap. All boxed, in good condition. Limited editions, etc. Private sale. S.a.e. for lists (clearout). Yorkshire. 07471 739455 (RB)

JOB LOT OF MIXED AUTO PARTS

£350. New and secondhand Vauxhall and Morris Minor new accessories. Auto books, manuals. Jaguar models. Lots more, ring for details. Traders welcome. Cambridgeshire. 07808 773836 (RB)

MODEL CARS FOR SALE

£Various. Matchbox Yesteryear, only £2.50 each. Vanguards, Corgis, £10 each. Motorsport sets. £20 each. Ford Capri, Ford Escort. Delprado/French cars/Rallye cars, £5.50 each. Hampshire. 07467 618113 (RB)

PERAMBULATOR FOLDING GARAGE

£500. Heavy duty nylon. 17ft long, 7ft wide, 7ft high. What I used to garage my classic Morgan. Have sold Morgan, now selling garage. Six months old. Surrey. 07984 469856 (RB)

PRIVATE REGISTRATION

£400. P80 RMB. Sheffield. 0114 265 1685

RAC ENAMEL SIGN

1960, £POA. Size 8in x 8in, Queen's Crown listed excellent condition. W Sussex. 07527 635372

REGISTRATION NUMBER PLATE

£Offers around £5,000. 54 LOB. Berkshire. 0118 986 3653 (RB)

PERFORMANCE

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They offer unbeatable value for money and yet perform like kits costing three times the amount. KSport brakes provide amazing performance for fast road and demonstrate their ability to provide the ultimate stopping power in full race environments.

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